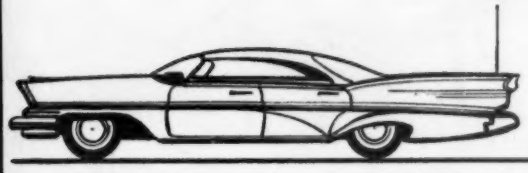
# MOTOR AGE

A CHILTON PUBLICATION

MAY 1960



**Also in this Issue: Special preview of the Indianapolis "500" race—p. 44**




HEAVY-DUTY OIL RING WITH

# TRI-COIL OFFSET SPRING

solves tough oil control problems—
and only Perfect Circle has it!

**Exclusive new Perfect Circle tri-coil spring has maximum area of contact with the ring all the way around—provides more uniform pressure than an ordinary hump-type expander. This results in higher cylinder conformability with less friction.**

**And, the stainless steel spring is offset in a channel next to the ring slots, rather than being directly behind them. Ventilation is greatly increased, and clogging of the ring and spring is reduced to a minimum.**

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**PERFECT CIRCLE**

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POWER SERVICE PRODUCTS • SPEEDOSTAT

Hagerstown, Indiana — Don Mills, Ontario, Canada



ANOTHER **BLUE STREAK** SECRET SERVICE TIP FOR YOU.

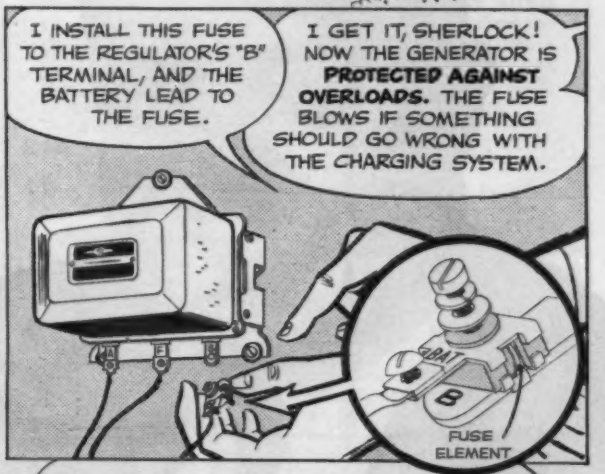
# SHERLOCK McKANICK and MIKE

"The Case of the GUARDED GENERATOR"













**STANDARD MOTOR PRODUCTS** MAKES THREE VOLTAGE-REGULATOR FUSES. NO.VRP-19 FOR REGULATORS RATED AT 15-29 AMPS, NO.VRP-20 FOR REGULATORS RATED AT 30-44 AMPS, AND NO.VRP-21 FOR REGULATORS RATED AT 45-60 AMPS. THERE ARE MORE DETAILS IN BULLETIN #103. SEND FOR YOUR **FREE** COPY TODAY.



**STANDARD MOTOR PRODUCTS, INC.,**
37-18 NORTHERN BLVD., LONG ISLAND CITY 1, NEW YORK




WORLD'S FOREMOST HEAVY-DUTY IGNITION LINE

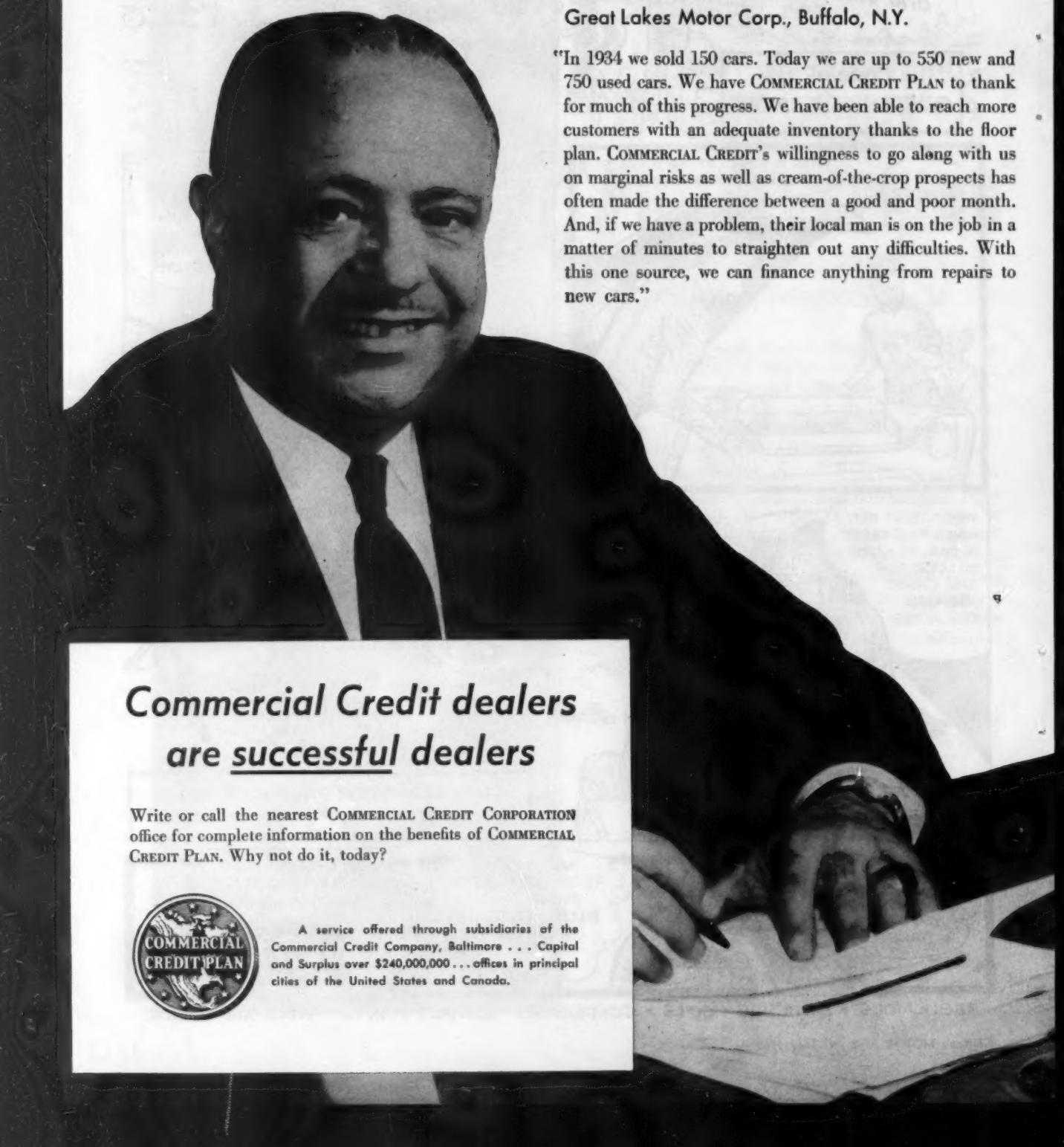
**BLUE STREAK**

REGULATORS • SWITCHES • COILS • CONDENSERS • CONTACT POINTS • WIRE AND CABLE

# "...finance anything from repairs to new cars"

says **A. J. LaMastra**, President,
Great Lakes Motor Corp., Buffalo, N.Y.

"In 1934 we sold 150 cars. Today we are up to 550 new and 750 used cars. We have COMMERCIAL CREDIT PLAN to thank for much of this progress. We have been able to reach more customers with an adequate inventory thanks to the floor plan. COMMERCIAL CREDIT's willingness to go along with us on marginal risks as well as cream-of-the-crop prospects has often made the difference between a good and poor month. And, if we have a problem, their local man is on the job in a matter of minutes to straighten out any difficulties. With this one source, we can finance anything from repairs to new cars."



## *Commercial Credit dealers are successful dealers*

Write or call the nearest COMMERCIAL CREDIT CORPORATION office for complete information on the benefits of COMMERCIAL CREDIT PLAN. Why not do it, today?

COMMERCIAL CREDIT PLAN

A service offered through subsidiaries of the Commercial Credit Company, Baltimore . . . Capital and Surplus over $240,000,000 . . . offices in principal cities of the United States and Canada.

# News from the Chemical Workbench

*SERVICE INFORMATION FOR THE PROFESSIONAL FROM PERMATEX*



## NEW 3-Ounce Size SOLVO-RUST Sets Up to Make "Silent Salesman" Display

Here's a product made to sell . . . right off the counter . . . right out of the carton. 3 ounces of pure power! Just a few drops will free frozen or rusted parts in seconds.

**WHO Needs It?**

*Everybody.* Maintenance men, servicemen, mechanics, plumbers, hobbyists, hunters . . . even YOU need this handy size.

**HOW Does It Work?**

Powerful penetrant is safe to use on all metals . . . has detergent qualities which spread fast. Dispersed graphite lubricates.

**What Does It Cost?**

In display carton your cost is 22¢ each; you sell it for 35¢. And don't forget SOLVO-RUST in the larger sizes for your own use.

## PERMATEX Valve Grinding Compound Great For Lawn Mowers

Perhaps you have a lawn mower to fix. Make yourself some extra money by selling a tube of Permatex Valve Grinding Compound. It does a neat job of sharpening dull reel-type lawn mower blades. Just dab a little bit on, reverse the pawls so that lawn mower rotates in opposite direction, and presto! The blade is sharp. Try it on your own lawn mower. And you'll probably find uses for it in your own shop—even to sharpening your own tools! It comes in a handy tube, and it costs you 26¢ in units of one dozen —and you sell it for 45¢!

## Short Cuts to Engine Repair with PERMATEX Cold Parts Cleaner

Throw away that bucket of kerosene or gasoline you've been using to clean engine parts. In the long run it's cheaper to use Permatex Cold Parts Cleaner. It does the job better. The handy bench-size 1½-gallon size comes complete with dipping basket. Just put the part you want to clean in the basket, lower into the can,



let stand, take it out—presto, the part comes clean! Permatex CPC is great for carburetors, gear assemblies — anything on the engine you need to clean. You can get it in 6-gallon drums, with or without dipping basket, and it will prove a time-saver in your daily operations. Permatex CPC is great for cleaning those greasy tools of yours, too.

Mechanics tell us that the newest addition to the Permatex line, Permatex Degreaser-Cleaner is one of the handiest products on the market today. And it's a perfect partner to Permatex Cold Parts Cleaner.

## HELPING YOU—THE PROFESSIONAL—SELL

Permatex provides you with the promotional tools you need to sell Permatex Chemical Products. For instance, there's a new all-products wall-chart available that gives you the full line of products, where to use them, and the prices. Your Permatex Supplier has a copy for you. Also, available is a special sealants-application chart. There are other promotional items — check your supplier—or write us direct.

## More Tips on FORM-A-GASKET®



1. Water Pump Seal. Apply a thin coat of Form-A-Gasket® No. 2 to both sides of the flange gasket to make a positive seal. Stops anti-freeze leakage.
2. For Vapor Lock Trouble. Coat the fuel pump and lines with Form-A-Gasket No. 2. It forms an effective insulation barrier at the hot spots.
3. Installing New Muffler. Apply Aviation Form-A-Gasket No. 3 to ends of exhaust pipe and tail pipe to make an easy, tight assembly.
4. Automatic Transmission Fluid Leaks. Apply Permatex Super "300" to both sides of torque converter gaskets and around other parts causing trouble.
5. Clutch Housing Oil Leak. Form-A-Gasket® No. 2 applied to bolt or stud threads will stop leakage through flywheel mounting bolts.

**Convenience with PERMATEX**

Permatex Form-A-Gasket® comes with special spreader caps. Applicator guns to be used with cartridge cans are available. Ask your supplier for the sizes and products that offer these convenient ways to apply Form-A-Gasket.®

## Car Care Dividends FOR DEALERS

Car manufacturers recommend a regular wash and wax procedure in their owner manuals—it keeps the resale value of the car higher. That's why you should tie-in an outside Car Care special whenever you have a lube or tune-up special. Usually with a lube or tuneup it means the car is around your station a good part of the day—so you have the opportunity to wash, clean and wax the car.

**Simplify The Job**

Permatex makes a complete line of Polishes and Cleaners that are easy to use and meet every need: Perma-Lustre—cleaner-polish for enamel and lacquer body finishes; Chromium Polish—cleans and protects chrome parts; Fabric Cleaner—for all stains, spots and soiled areas. Removes tar, lipstick, gum, grease; Blue-Blazes®—removes dirt, grime from finishes. Leaves long-lasting silicone wax coating; Car Wash—powerful detergent action. Won't streak or hurt finish; Windshield Cleaner Concentrate—for automotive windshield washer reservoirs and spray bottles; Acrylic Cleaner and Polish—use on all acrylic finishes. Tar Remover—removes all tars, gums; safe for all acrylics.

**Try It And See For Yourself**

Order the Permatex Polishes and Cleaners you need. Check first hand how well this idea works.



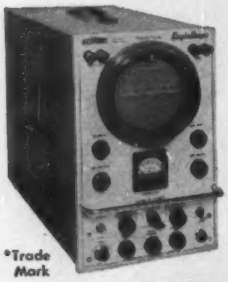
*Do you have a service tip on a Permatex Product? You will get $5 when it's published in "News from the Chemical Work Bench." Send it to:*

**PERMATEX COMPANY, INC.**
300 Broadway, Huntington Station, L. I., N. Y.
Factories: Brooklyn 35, N. Y. Kansas City 15, Kan.

# Check This List!

How long does it take you to find these engine faults?

| Fault Description | Old Way | EnginScope Takes |
|---|---|---|
| Distributor Cam Lobe Accuracy | 30 min. | 3 min. |
| Distributor Breaker Point Condition | 30 min. | 3 min. |
| Distributor Cam Angle & Variation | 30 min. | 3 min. |
| Distributor Cap & Rotor Condition | 10 min. | 3 min. |
| Ignition Coil & Condenser Condition | 15 min. | 3 min. |
| Sparkplug & Ignition Wire Condition | 10 min. | 3 min. |
| Carburetor Unbalance (8 cylinders) | 10 min. | 3 min. |



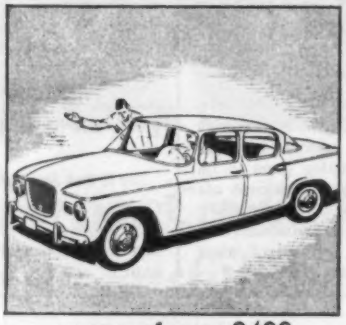
*Trade Mark

This is only a partial list. Many mechanical jobs are shortened too. Write for details and/or a free demonstration.

**DU MONT® EnginScope***

Automotive Equipment Division
ALLEN B. DU MONT LABORATORIES
750 Bloomfield Ave., Clifton, N. J.

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## A $2200 LARK SEDAN BY STUDEBAKER



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# $142,000
# PRIZARAMA



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**MAY 1960**
Vol. 79, No. 6

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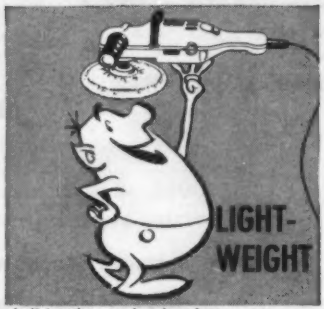

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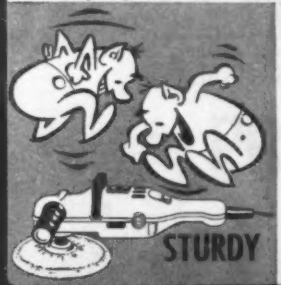
## Profits start at once with low-cost

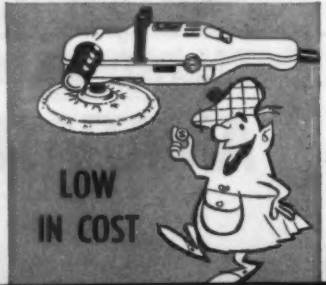
# NEW B&D SERVICEMASTER POLISHER




Heavy-duty construction features—ball bearings, spiral bevel gears, etc.




## Earns profits with the first job ...while you pay monthly!

The first car you polish every month can pay you a *profit* . . . plus labor, materials *and* the monthly payment of $4.88 for your new Black & Decker Servicemaster Polisher. The jobs you do the rest of the month (less labor and material costs) are *all* profit. With only one job a week, you can pay for the polisher and pocket a handsome profit the very first year!

The Servicemaster Polisher offers you the best design of its kind, too. Lightweight, strong construction . . . perfect balance, compact size . . . all make for fast work and the finest finish. Buy it . . .

for as little as $4.88 a month!



Compact, lightweight and low-cost

# NEW B&D SERVICEMASTER SANDER

## Streamlined for tight spots . . . priced for top profits!

Touch-up jobs are a soft touch with the new-design B&D Servicemaster Sander. So compact, you get in and out of tight spots with ease . . . feather edging is a cinch. Its low cost won't stretch your budget . . . and buying it on time makes owning still easier.

The Servicemaster Sander's ingenious, close-coupled housing provides perfect balance for ideal sanding control . . . even when held at arm's length. Its lightweight, sturdy construction helps make any job easier, quicker. A unique exhaust blows dust and dirt away from you and your work. All this . . .

for as little as $4.88 a month!

50th YEAR

LEADING JOBBERS EVERYWHERE SELL

See Them-Electric Yellow Pages-for Service & Sales

**Black & Decker**

QUALITY POWER TOOLS

THE BLACK & DECKER MFG. CO., Dept. 5105
Towson 4, Md. (In Canada: Brockville, Ont.)

- ☐ Please arrange a demonstration of Servicemaster Polisher
- ☐ Please arrange a demonstration of Servicemaster Sander
- ☐ Please send additional information on.....

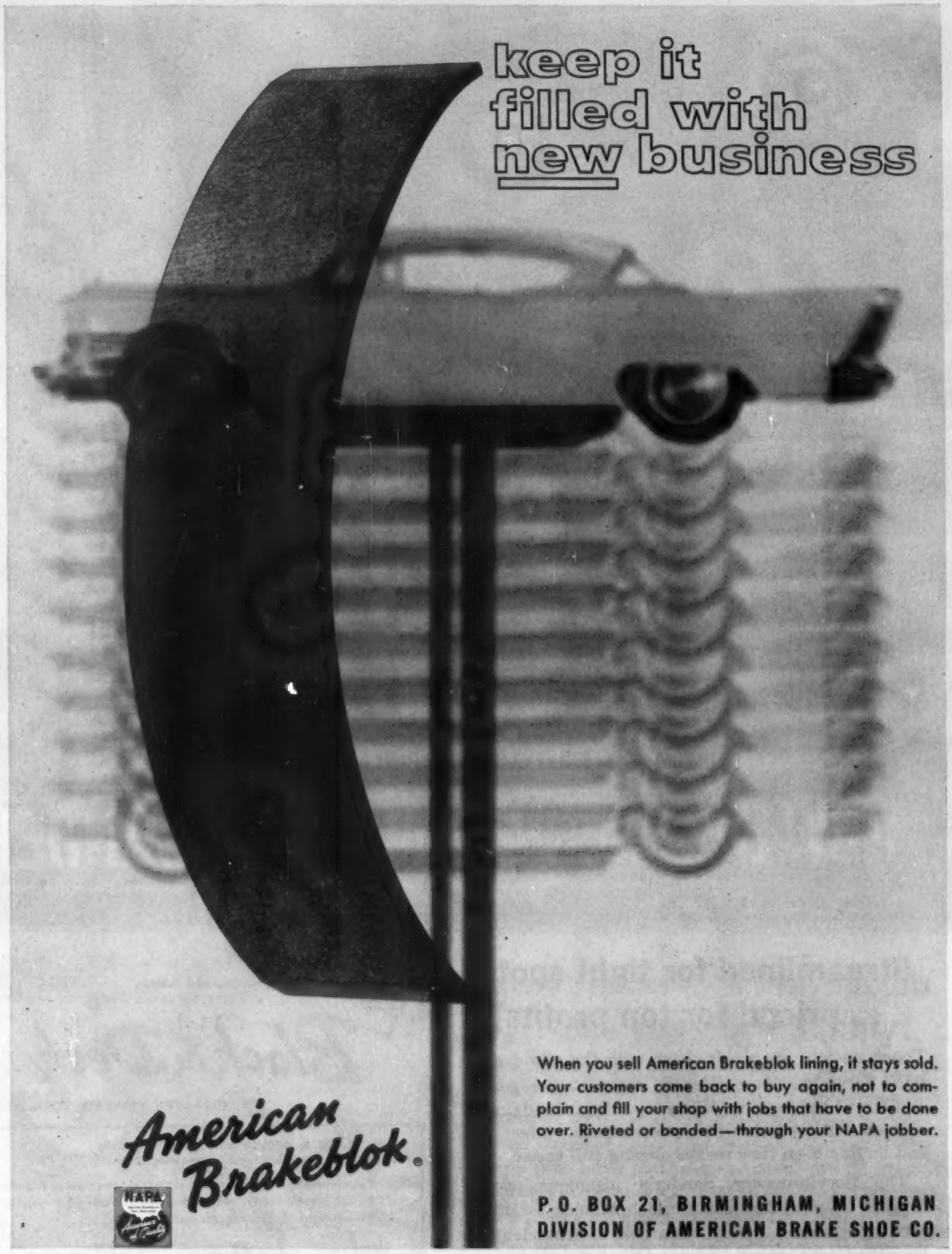
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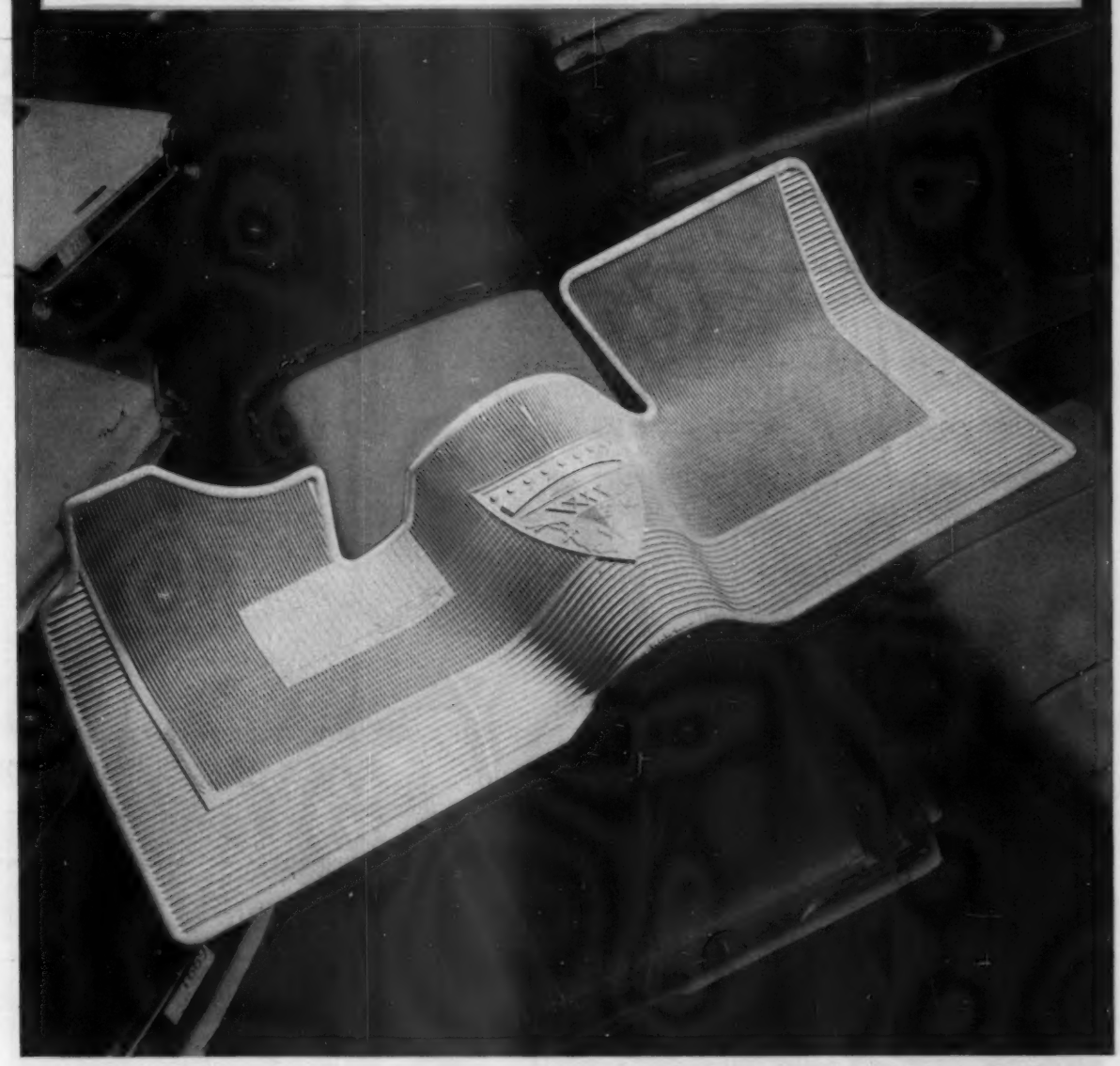
City.....Zone.....State.....

☐ Drills ☐ Belt Sanders ☐ Vacuum Cleaners ☐ Impact Wrenches




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# Rubbermaid® KAR-RUGS have MOST to sell



...and always FIRST with the MOST!

Rubbermaid KrestLiner Kar-Rugs... the first true door-to-door fit engineered in custom tailored sizes for front and rear floors of all cars. KrestLiners give you extra sell — toughest quality rubber compound and exclusive "Rubbermaid Reinforced" feature. Famous Rubbermaid Kar-Rug brand assures national recognition and acceptance. If you haven't got 'em... get 'em.



Get special deal on Wooster Wheeler Display

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MAY IS NATIONAL SAFETY MONTH...

# GET THE JOB DONE BETTER AND FASTER WITH MOPAR

**It's Safety Check time again, and the smart installer makes the most of it when he uses MoPar parts and accessories *exclusively***

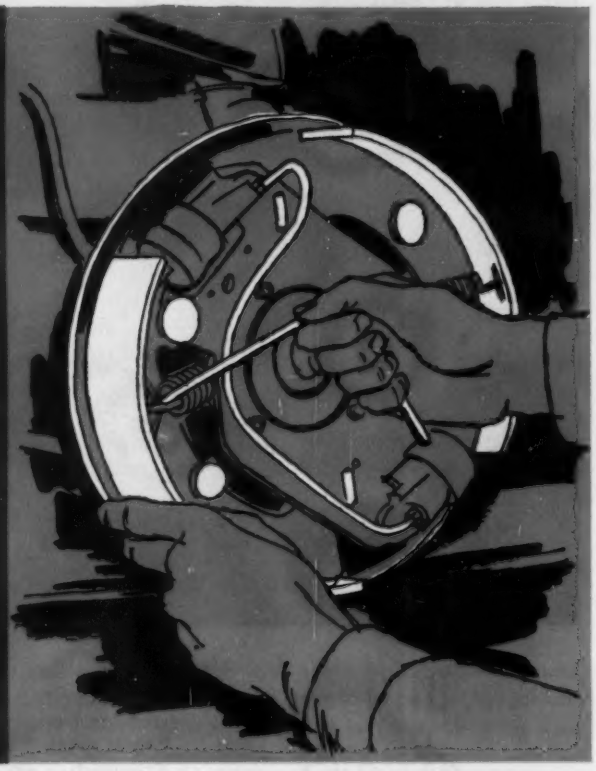
**You're ahead with MoPar because:**

- MoPar replacement parts are engineered by Chrysler Corporation to fit perfectly
- A perfect fit means less installation time, more time to do more jobs
- More time and more jobs mean more profits for you

**Your customers are ahead with MoPar because:**

- MoPar replacement parts are exact duplicates of original Chrysler Corporation equipment
- Exact duplicates mean original equipment performance
- MoPar Safety Checks combine quality workmanship and dependable products





MoPar PARTS AND ACCESSORIES

MoPar Division, Chrysler Motors Corporation
Detroit 31, Michigan

Right now is the time to make doubly sure you have sufficient stock to handle your Safety Checks promptly. Call your MoPar Wholesaler or your Valiant, Plymouth, Dodge, De Soto, Chrysler, Imperial and Dodge Truck Dealer.

***Sell the line that keeps your customers sold on you—MoPar***

# Don't be HALF a MECHANIC



**NEW!** For 1959-'60 FORDOMATIC 2-Speed Transmissions... *Reverse Band Adjusting Tool* with pre-set torque mechanism and gauge spacer. Assures accurate adjustments to car manufacturer's specifications.

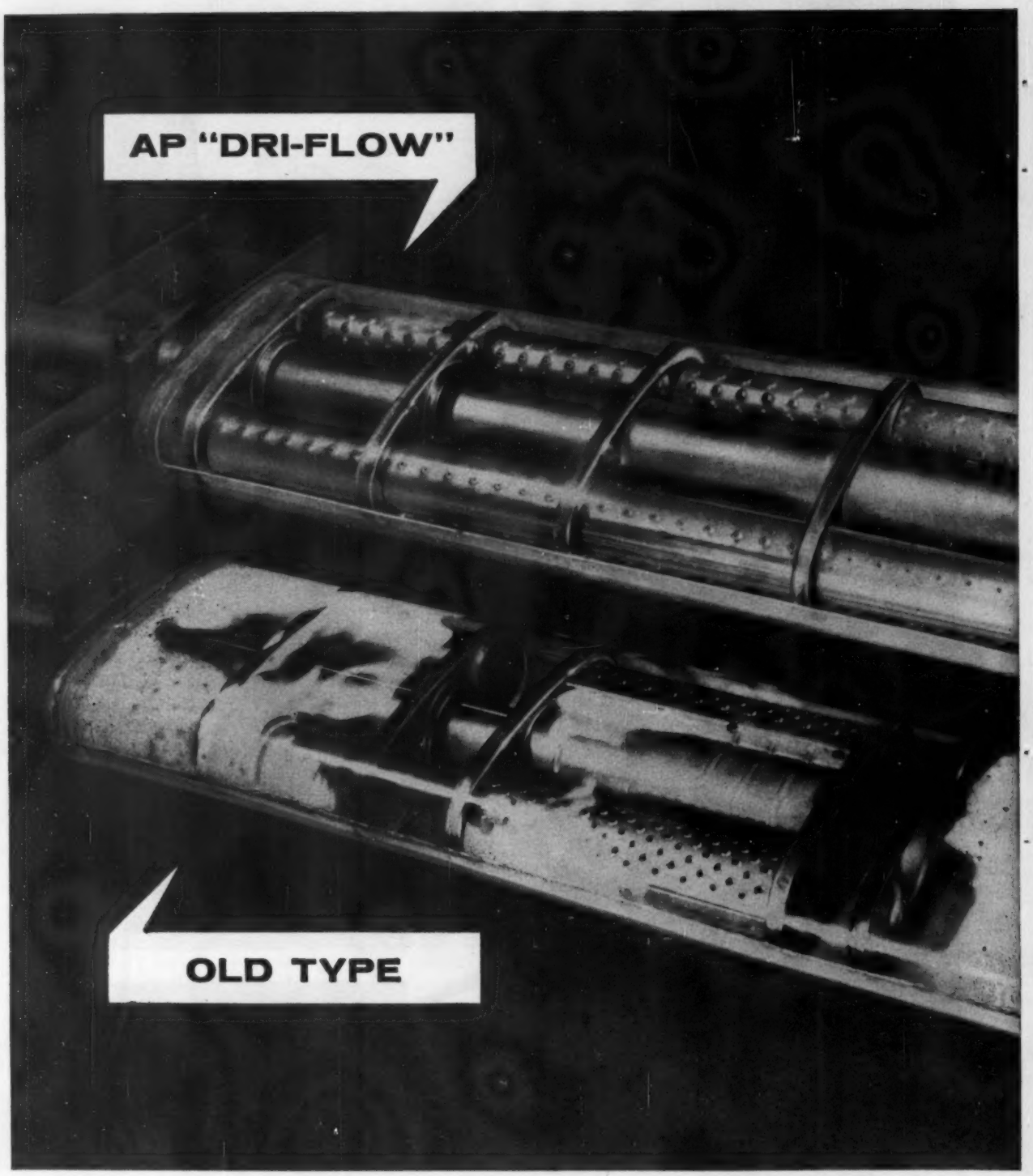
If you don't have the Tools and the know-how to service and repair Automatic Transmissions today, you are only getting half the job done and probably cutting your income in half, too! Complete *your* service abilities with Automatic Transmission know-how. This new FORDOMATIC BAND ADJUSTING TOOL is only one of the many we will show you how to use that will quickly put you into this profitable service all the way. Ask us about it!

NAPA

## New Britain HAND TOOLS

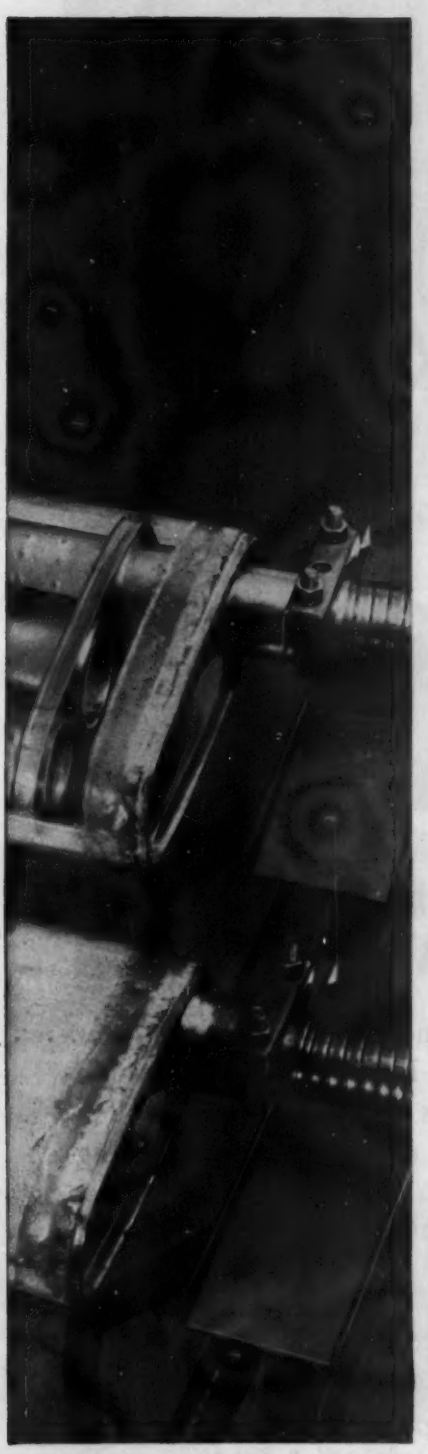
THE NEW BRITAIN MACHINE CO.
NEW BRITAIN • CONN.

# Only AP gives you more



# protection against acid

## ...for longer life



Everyone agrees that one of the major causes of muffler failure is internal corrosion. This is the result of excessive condensation and of metal-eating acids inside. No other muffler manufacturer has tackled the challenge as scientifically as AP, with its "Dri-Flow" design. This calls for more inner parts, but AP gladly provides them —at no extra cost—because AP determined to produce a muffler that stays drier on the inside.

As you can clearly see in the plastic shell test mufflers at the left, AP's "Dri-Flow" design so effectively eliminates cold spots that the problem on rustout from internal condensation has been practically eliminated.

But "Dri-Flow" is only one of many features that make AP the quality line. AP also gives you more coated steel, asbestos liners, more and heavier inner construction, thicker shells, thicker outer heads, air-liner shells, double-locked crimped seams, and Non-Rust pipes. They all add up to make AP the longer-lasting muffler. Call your wholesaler today and stock up on AP mufflers. THE AP PARTS CORPORATION, 3-R AP BUILDING, TOLEDO 1, OHIO.

**MORE FOR YOUR MONEY...**
**MORE MONEY FOR YOU**

*with* **AP**

**WORLD'S LARGEST MANUFACTURER OF REPLACEMENT MUFFLERS**




Your prospects are made aware of the AP name through 45,000 A-Boards, consistent advertising in LOOK, ARGOSY, TRUE, POPULAR MECHANICS, MECHANIX ILLUSTRATED and via Walter Cronkite over the entire CBS radio network.




Here's one more reason '60 is a big year for Chevrolet dealers and salesmen. Motor Trend—the world's largest general automotive magazine—has bestowed its coveted Car-of-the-Year award upon Corvair. Why? The reasons given by the editors in their unanimous decision (announced in the April issue) clearly detail the selling advantages Corvair has over all other compact cars in the land. "Four-wheel independent suspension totally unlike any other U.S.-built car" . . . "air-cooled aluminum engine . . . not dependent on the properties of a liquid coolant" . . . a rear-mounted engine and transaxle "allowing a flatter floor and lower roofline . . . " Chevrolet dealers have the Car of the Year—and it's another big reason they're having a really big year! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

**corvair** ★
**BY CHEVROLET**

# SEALED nose bumper

*another red ● ball extra*

**Rubber bumper not only protects the housing from sharp blows, but also seals the housing and keeps dirt from entering the hammer case bushing . . . another exclusive red ● ball extra you get with Ingersoll-Rand Impactools to assure long, trouble-free operation and easy maintenance.**



**ELECTRIC IMPACTOOL**
*Size 4U-SD, ½" Drive*

- **Dirt-Sealed Trigger.** Plunger-operated switch is sealed tight from dust and dirt. Another I-R exclusive.
- **"Cuss-proof" Socket Retainer.** Sockets can't fall off accidentally, but strong, spring-held retainer can be easily replaced. Another I-R exclusive.
- **Life Guard Commutator.** Exclusive I-R construction prevents motor damage, permits easy dressing, provides long brush life.
- **Job-Tailored Motor.** Not "adapted" but built specifically for rugged Impactool duty.
- **T-Anvil Drive.** Unlike other types, provides true radial blow with maximum power transmission.

*best design—biggest line*

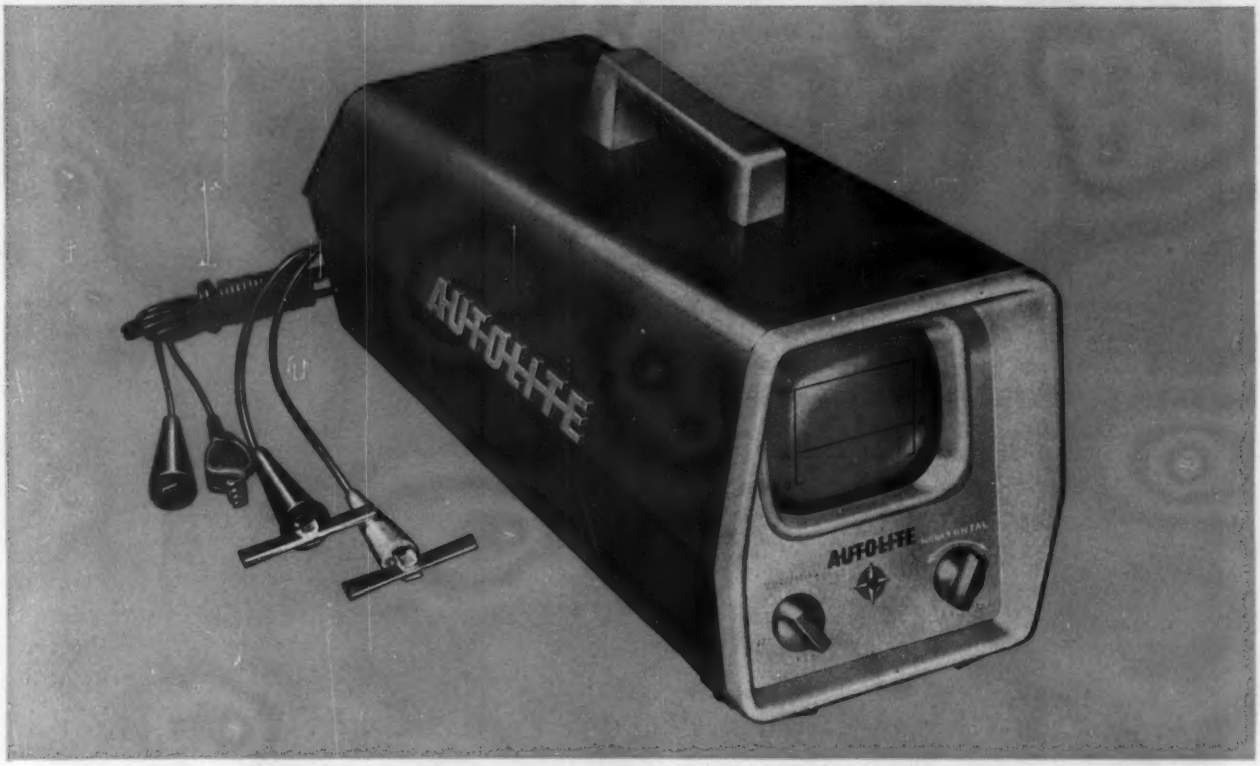
***look for the red ● ball extras***

**Ingersoll-Rand**

11 Broadway, New York 4, N. Y.

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## SOON FROM AUTOLITE ENGINEERING




# "BIG-SCREEN"

Here's the latest word in Spark Plug scopes, and it's coming soon from Autolite! After analyzing *all* types and *all* models of scopes available, Autolite has come up with a complete, professional, *big-screen* scope at a low, low price—designed and engineered to check spark plugs, wires, available and required voltage. And it's also designed to check complete ignition performance.

The Autolite Spark Plug scope eliminates troubles found in some scopes and gives you the tremendous advantage of *big-screen viewing* plus other exclusive features.

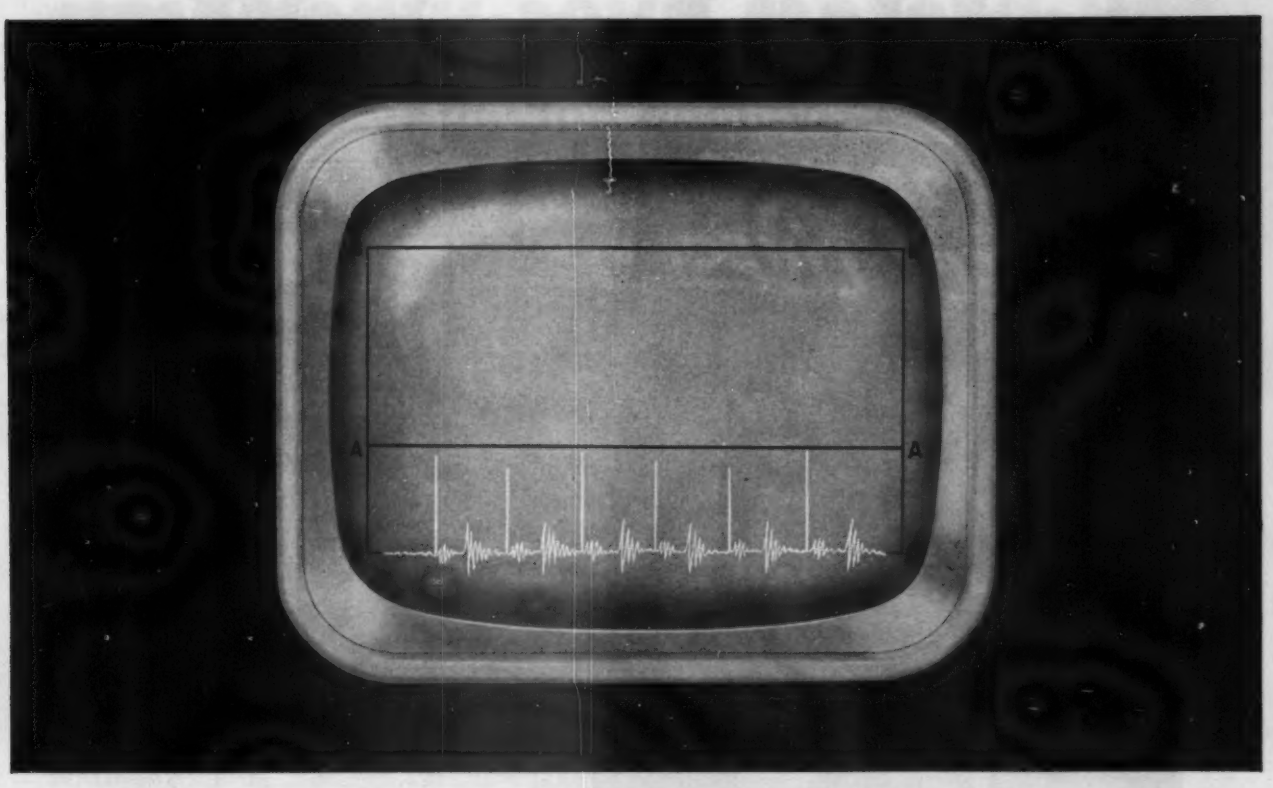
The Autolite "Big-Screen" Spark Plug scope is another "GO" promotion to help you sell more Autolite Spark Plugs. It will be available soon.

*Watch for the Autolite "Big-Screen" Spark Plug scope soon to be released! You'll be glad you waited.*




**ANOTHER "GO" PROMOTION FROM**

**Now! Autolite sponsors the election news with Dave Garroway on NBC-TV TODAY Show—and "News on the Hour," NBC Radio.**




# Spark Plug Scope

**Critical demands for precision ignition adjustment brought about these features**

• Simple as TV to operate • Has pattern check guide • Modern, functional design • Extra-sturdy plastic case • Portable—weighs under 10 pounds • Attaches to either 6- or 12-volt batteries • Has both vertical and horizontal controls

• Larger area screen for fast, accurate reading • Uses standard "plug-in" auto radio vibrator instead of soldered-in transistors; simpler to repair, no lost time • Brighter pattern more easily seen by mechanic and customer • Low, low price!

**AUTOLITE® SPARK PLUGS**

THE ELECTRIC AUTOLITE COMPANY • TOLEDO 1, OHIO

# You protect lives when you




For Safety's sake
standardize on
Wagner® Lockheed
the Quality line
of BRAKE SERVICE PRODUCTS



**ONE CALL GETS ALL**
your brake service needs from one source—your Distributor of Wagner Products.




**Wagner® Lockheed**
**Heavy Duty Brake Fluid**
**surpasses SAE specification 70R1**




**Wagner® Lockheed**
**SUPER Heavy Duty Brake Fluid**
**is the very finest on the market**

LOCKHEED BRAKE PARTS, FLUID, BRAKE LINING and LINED BRAKE SHOES • AIR HORNS • AIR BRAKES • TACHOGRAPHS

# use Wagner® Lockheed

## the top quality

# BRAKE FLUID

## there's none safer . . . none better

Your customers' safety . . . even their lives can depend upon your choice of the brake fluid you supply . . . That's why it is so important that you use only a top-quality, *safe* brake fluid such as Wagner Lockheed.

Wagner Lockheed Brake Fluid is *made by Wagner* —the world's largest manufacturer of brake fluid. And, this superior quality product is the world's largest selling brand. It is compounded of the finest ingredients—*chemically balanced* to function efficiently under all driving conditions—in all seasons.

**WAGNER LOCKHEED *Super* HEAVY DUTY BRAKE FLUID** is the very finest on the market. It surpasses S.A.E. specifications 70R1 and 70R3, meets State laws, and conforms to Federal specifications . . . Recommended for use on all heavy-duty trucks, also for modern high-horsepower passenger cars.

**WAGNER LOCKHEED HEAVY DUTY BRAKE FLUID** surpasses S.A.E. specification 70R1, meets State laws, and also conforms to Federal specifications . . . It definitely is a heavy-duty fluid—yet is moderately priced. Performance proves it to be the best fluid in its price range.

There's a supplier of Wagner Products near you. Look to him for Wagner Lockheed Brake Fluid, Brake Parts, Power Brake Repair Kits, Brake Lining and Lined Shoe Sets.

FOR DETAILS, consult your Distributor of Wagner Products, or use coupon for FREE copy of Catalog AU-1 . . . Also ask about how easily you can qualify to become a Wagner Franchised Dealer —and enjoy special benefits.

## *FOR SAFETY'S SAKE . . . check the Brake System!*

This is National Vehicle Safety Check Month . . . Do *your* part. Every time you put a car up on a lift, ask the owner to let you pull a wheel . . . check the brake system.

Don't guess. *Be sure* that the braking system—parts, fluid and lining—are in safe operating condition. You'll help save lives . . . and build profitable business, too.




**Wagner Electric Corporation**
6498 Plymouth Ave., St. Louis 33, Mo., U.S.A.

Please send:
- ☐ FREE copy of Catalog AU-1
- ☐ Details on Franchised Dealer Program

NAME_____

FIRM NAME_____

ADDRESS_____

CITY & STATE_____

WF60-4

# Are You Getting Your Share of FILTER SALES for . . . Foreign Cars?

Don't sit and wait! The answer to your Foreign Car Filter problem is here! Your customers are looking for Filter Cartridges in the WIX FCA-6 Assortment RIGHT NOW . . . *not next Fall!* With these genuine WIX Cartridges you can service 85% of all Foreign Cars on the road.

The FCA-6 Assortment gives you giant coverage — at midget cost! In addition to the 6 Cartridges, you get a Handsome Window Streamer PLUS the 1960 WIX Dial-O-Matic Cartridge Selector that enables you to instantly identify the right oil and air filter on ALL American Cars and Light Trucks . . . Oil Filters on ALL Foreign Cars. Get this money-making assortment from your WIX jobber TODAY!

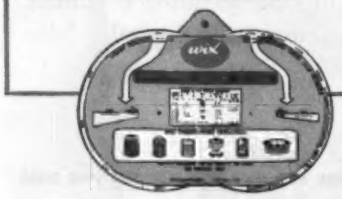
**THESE 6 WIX FILTERS**

| | |
|---|---|
| 1—PC-300P | 1—PC-304P |
| 1—PC-301P | 1—PC-306P |
| 1—PC-302P | 1—PC-308 |

**SERVICE THESE 20 MAKES**

| | |
|---|---|
| Allard | MG |
| Aston-Martin | Metropolitan |
| Austin | Morgan |
| Austin-Healy | Morris |
| Daimler | Standard |
| Datsun | Sunbeam-Talbot |
| Fiat | Triumph |
| Ford-English | Vauxhall |
| Hillman | Volvo |
| Lancia | Wolseley |

**THE FCA-6 ASSORTMENT GIVES YOU ALL 6 FILTER CARTRIDGES**
*PLUS*
**THIS WINDOW POSTER**
*PLUS*
**DIAL-O-MATIC SELECTOR**



DIAL-O-MATIC instantly identifies the right Oil and Air Filter Cartridge for ALL American Cars and Light Trucks—Oil Filter Cartridges for Foreign Cars. It's a must for busy service stations.




wix® FILTERS

**WIX CORPORATION • • • GASTONIA, N. C.**

***In Canada: Wix Corporation Ltd., Toronto***
***In New Zealand: Wix Corporation New Zealand Ltd., Auckland***




First step to an unforgettable vacation! That's how folks feel after reading these exciting General Motors ads that tell them: "There's Nothing Like A New Car!" These colorful advertisements stress the excitement of new car ownership—the fun it means for the whole family—and the truly rewarding investment it represents in satisfaction, comfort, and safety.

The amazing expansion in today's consumer income is the reason for this special GM advertising campaign in leading national publications. Consumers have more disposable income than ever before, and more spare time in which to enjoy it. And economists predict that the next few years will find more and more families in higher income brackets—more of them moving to the suburbs—many more of them becoming multiple car families.



This prosperity will be reflected in even greater opportunities for everyone in the automotive business—and General Motors advertising helps GM dealers share this expanding market. It's great to be a GM dealer in the Sixties!

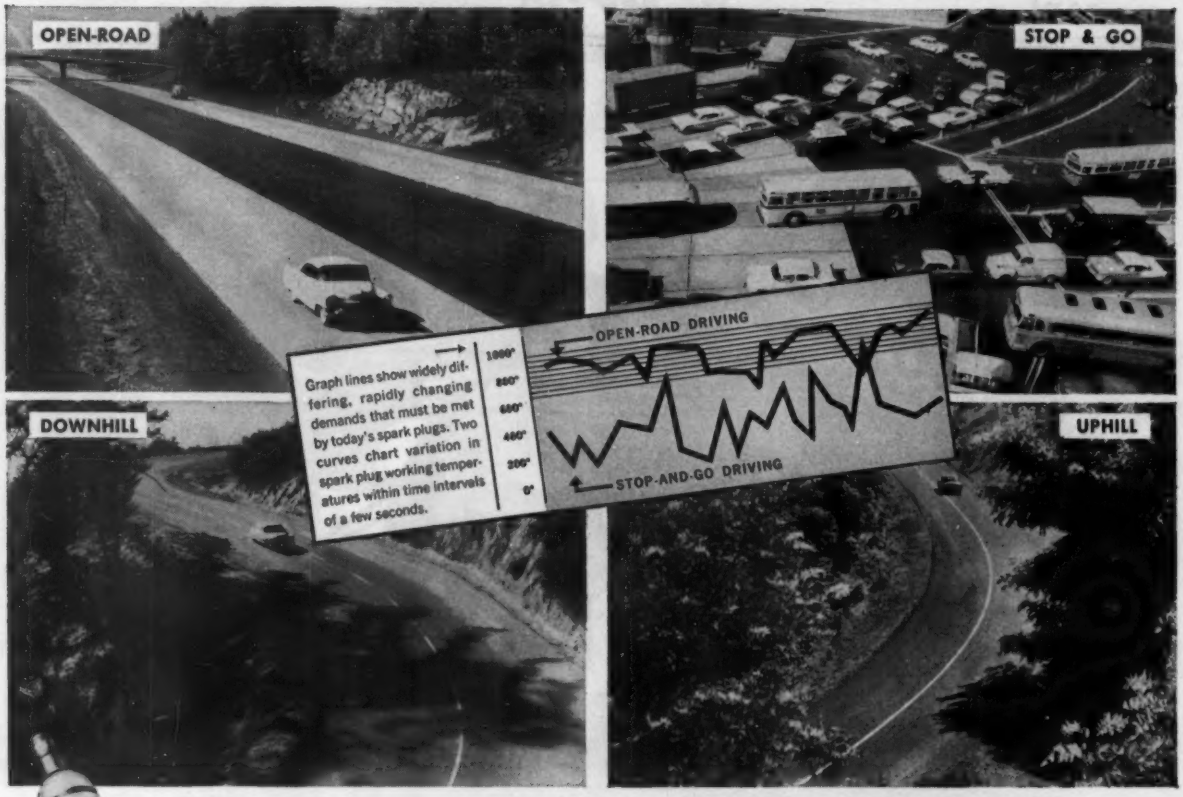
GENERAL MOTORS

*GO GM FOR '60*

CHEVROLET · PONTIAC · OLDSMOBILE · BUICK · CADILLAC · ALL WITH BODY BY FISHER

# ROBERT BOSCH thermo-elastic SPARK PLUGS ADAPT THEIR WORKING TEMPERATURES

## *to every driving situation*







***More profit-power for you with extraordinary***

## ROBERT BOSCH thermo-elastic SPARK PLUGS

The plug that *"thinks"* for itself—that's ROBERT BOSCH thermo-elastic, triumph of five decades' experience. Working temperatures adapt for every driving situation—stop-and-go, open-road, uphill, downhill, hot weather, cold weather. The secret is in the exclusive diamond-hard Pyranit® insulator, the tip of which is heated from the inside and outside—uniformly, simultaneously.

ROBERT BOSCH thermo-elastic plugs properly selected, prevent pre-ignition, fouling, loss of power. Big replacement market on imported cars, largely factory-equipped with ROBERT BOSCH . . . increasingly in demand for American cars and engines, too. Write for facts, specification chart.

**ROBERT BOSCH CORPORATION**

40-25 Crescent Street, Long Island City 1, N. Y. • 225 Seventh Street, San Francisco 3, California

® Reg. U. S. Pat. Off. ROBERT BOSCH GMBH Stuttgart




# "Monmouth has always meant quality...

. . . and in actual performance, this quality really pays off. I know because I always used them in my own stock cars that I raced. As a garage owner and engine rebuilder for 28 years, I've long since learned to rely on Monmouth for top quality engine bearings. What's more, my NAPA jobber makes it easy for me to use the best. He carries the complete line and gives me fast service."

says Clifton L. Taylor, independent garage owner of Delmar, Delaware

If you want "performance that pays off," use Monmouth Bearings in all of your engine rebuilds. Your nearby NAPA jobber can give you instant service on your complete bearing requirements.




*Low premium "customer insurance" is yours when you install . . .*

## MONMOUTH *Engine Bearings*

**CLEVITE SERVICE:** Cleveland Graphite Bronze • *Division of Clevite Corporation* • Cleveland 3, Ohio

# ONLY MONROE GIVES YOU A CAMPAIGN AS BIG AS THIS!

## TO HELP YOU SELL MONRO-MATIC®



MONROE

MONRO-MATIC

SHOCK ABSORBERS

Never before have ride control products been advertised with a campaign as sweeping as the one for Monro-Matic shock absorbers and Load-Levelers. And never before have two comparable products been so enthusiastically received by

**MONRO-MATIC® SHOCK ABSORBERS** stabilize a car, keep wheels from bouncing off the road, prevent hard steering and extra tire wear . . . give an extra measure of safety. The 60-day Free Ride Plan guarantees customer satisfaction.

**MONROE AUTO EQUIPMENT COMPANY,**
In Canada, Monroe-Acme Ltd., Toronto, Canada

*WORLD'S LARGEST MAKER OF*



• **BILL STERN**, dean of American sportscasters, is your No. 1 Monroe salesman as he broadcasts his "Monroe Sportsreel" each morning, Monday through Friday, over more than 300 stations of the Mutual radio network.




- **Big full-page ads** promote Monro-Matic shocks and Load-Levelers to millions of car owners, **month after month,** in LIFE, THE SATURDAY EVENING POST, POPULAR MECHANICS, SPORTS AFIELD.
- There's a landslide of **Monroe promotional material** available for you—newspaper mats, radio and TV spots prepared by Bill Stern, 24-sheet posters, display stands, window streamers, handout folders—to help you tie in directly with this all-out campaign!

# SHOCKS and LOAD-LEVELERS®!

**both the trade and car owners. If you're not already tied in with this greatest of all Monroe promotions, check today with your jobber for details on the big profit-making deals waiting for you!**

**LOAD-LEVELERS®**—Monroe stabilizing units with built-in ride control for a level ride under all road and load conditions—prevent bumping on driveways, swaying on curves and "bottoming." Hottest item in the trade!




Monroe, Michigan
In Mexico, MEX-PAR, Box 21863, Mexico City

*RIDE CONTROL PRODUCTS*

# For monthly profits that ZOOM!

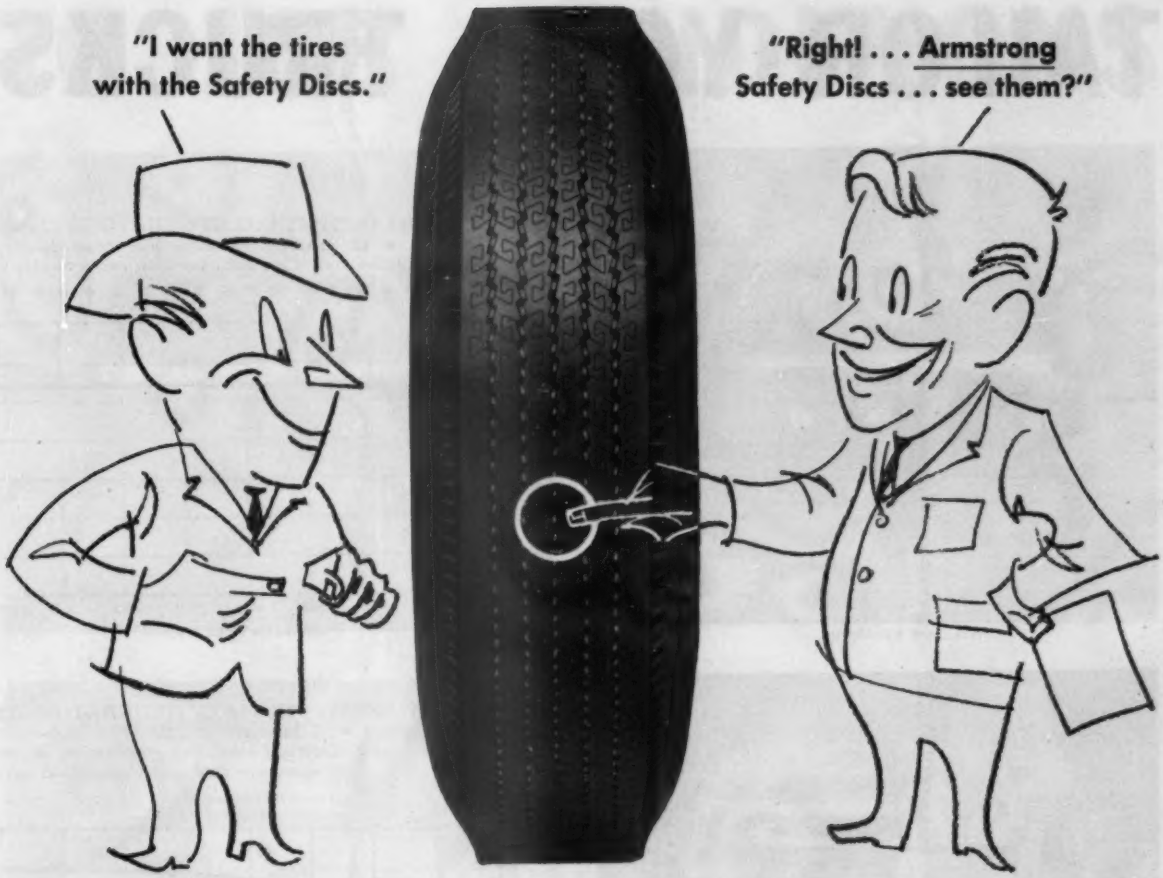



The SIOUX No. 1200 H.D. Polisher is a favorite in shops and service stations. Its balance and touch combined with speed and power assure finest results with minimum labor. SIOUX dependability makes it the best buy in the long run.

SIOUX Auto Polish quickly cleans and polishes all lacquers, synthetic and enamel surfaces. SIOUX-VENIR wax for machine and hand veneering combines a plastic base with durable compounds to produce a hard glazed finish of lasting beauty!

BUY SIOUX Polishers & Polish Soon!

ALBERTSON & CO., INC.
SIOUX CITY, IOWA, U. S. A.




# YOU CAN BUILD A BUSINESS WITH ARMSTRONG SAFETY DISCS

**ARMSTRONG DEALERS ARE PROSPEROUS DEALERS**

1. Exclusive features customers can see – patented Safety Discs give extra safety at no extra cost.
2. Famous "fist" advertising, most effective in the industry, includes LIFE, LOOK, POST and on TV.
3. Complete line includes three grades of Safety Disc tires to help you trade up.
4. More room for profit, tire for tire, than any important brand!
5. Longest, strongest guarantee – with road hazard feature, another big extra.
6. No "company store" competition, no direct truck tire sales. Freedom to sell every buyer!

***HERE'S WHY.*** Armstrong's famous Safety Discs are not hidden inside the tire. You can show them to customers. You can demonstrate, in just 10 seconds, how Safety Discs can save their lives.

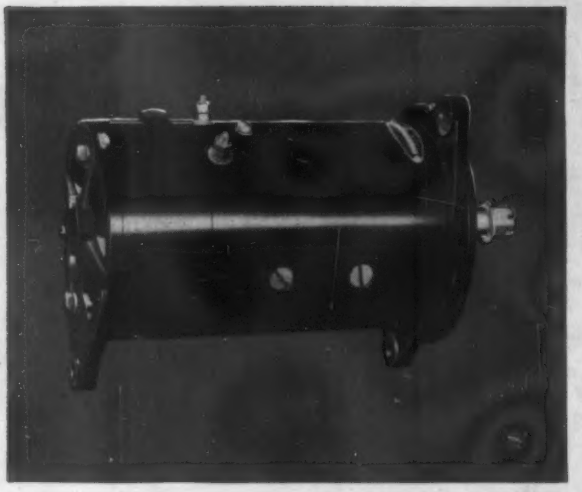
And you can meet and beat any competition – because there's no extra cost for this extra Armstrong safety.

No wonder Safety Discs have sold millions of tires. No wonder Armstrong is the franchise prosperous dealers are sold on.

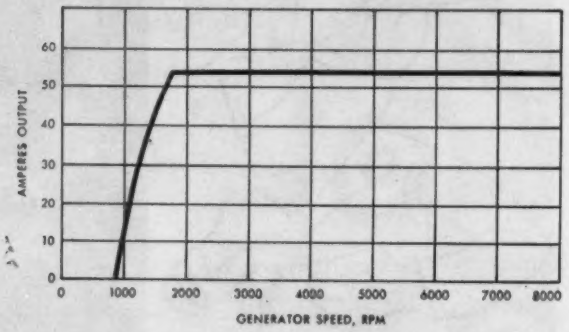
Get the Armstrong facts – and grow!

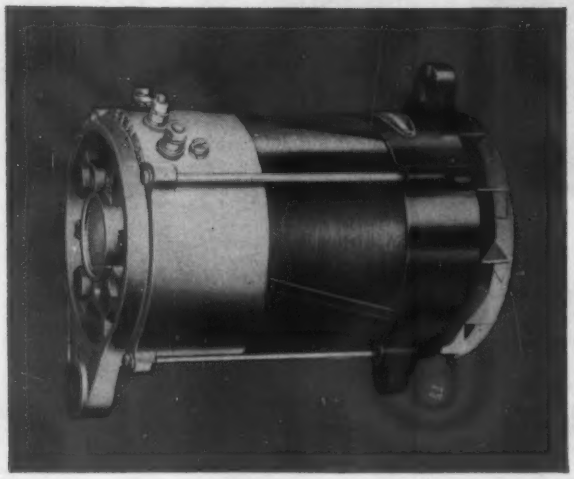
**ARMSTRONG RUBBER COMPANY**
Home Office, West Haven, Conn.

# TAILOR YOUR TRUCKS

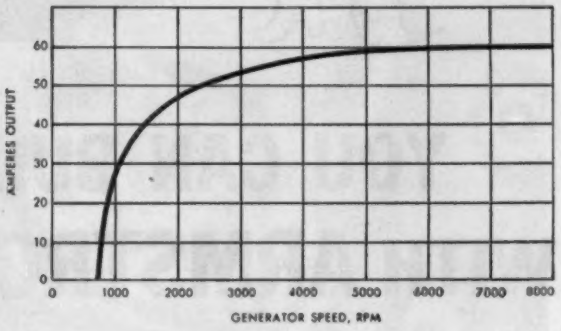


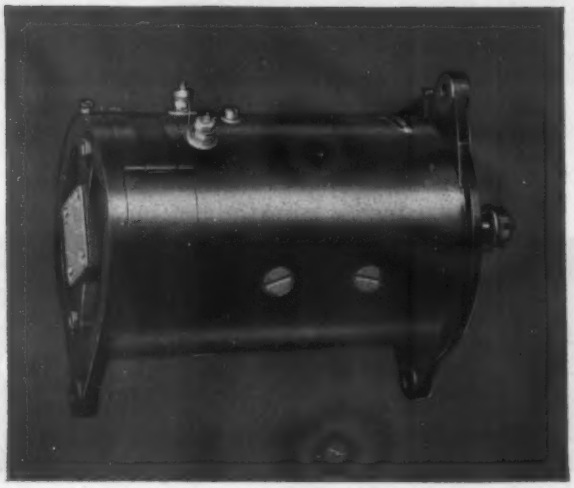
**1106991** EXTRA-OUTPUT D.C. GENERATOR—12 volts • 55 amperes • 12 amperes at idle—For cross-country trucks, school buses and other vehicles with extra electrical equipment.



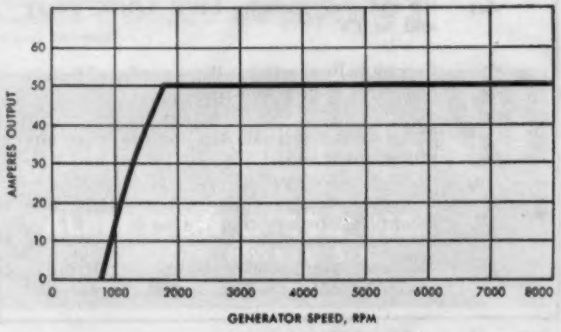



**1117070** SELF-RECTIFYING A.C. GENERATOR—12 volts • 60 amperes • 27 amperes at idle—For high-duty vehicles with heavy electrical loads . . . operating at all speed ranges. Ideal for excessive low-speed operation and curb-idling.

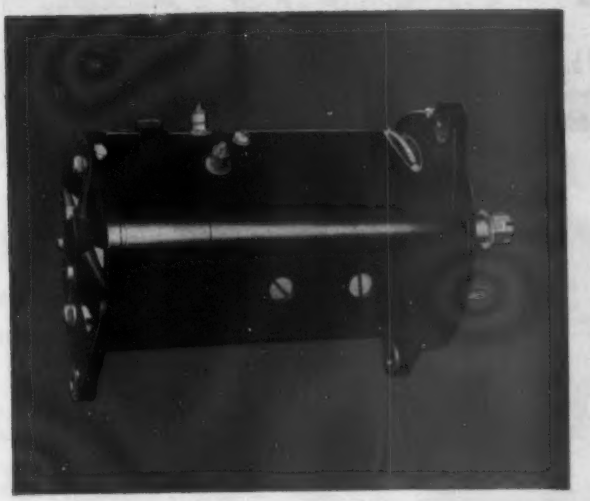


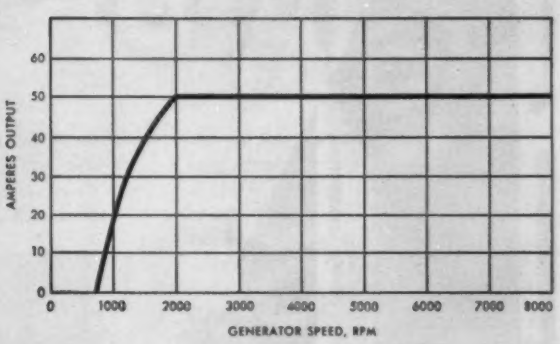
**1106985** EXTRA-OUTPUT D.C. GENERATOR—12 volts • 50 amperes • 14 amperes at idle—Short frame generator for difficult mounting applications. For vehicles in city and suburban use. Not for cross-country operation.

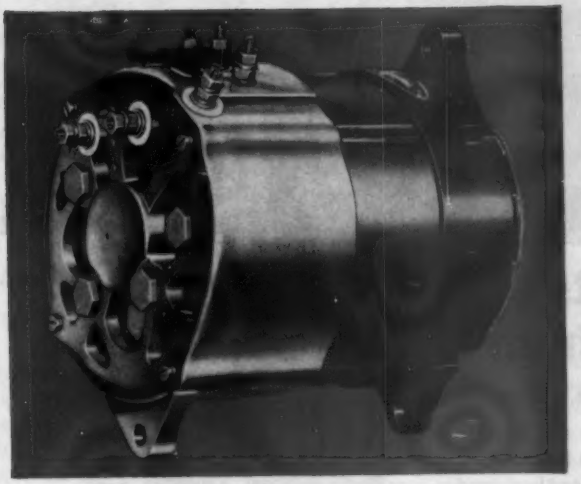


# TO JOB CONDITIONS

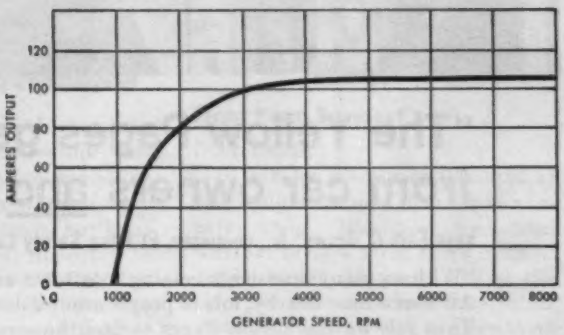


**1106986** EXTRA-OUTPUT D.C. GENERATOR—12 volts • 50 amperes • 20 amperes at idle—For metropolitan trucks and school buses, with extra electrical equipment . . . operating at low speeds and with engine idling most of the time.



**1117115** SELF-RECTIFYING A.C. GENERATOR—12 volts • 105 amperes • 10 amperes at idle—For high-duty vehicles with extra-heavy electrical loads . . . operating at all speeds. A.C. voltage available for 110 V conversion.




## Delco-Remy offers a complete line of D.C. and A.C.-D.C. generators that are right for the job.

Demands on the electrical systems of trucks vary with their use. For best performance, whether the vehicles be new or already in service, the electrical equipment should be job-matched to meet those demands.

Do your trucks have extra electrical equipment? Operate cross-country, around town or off the road? Do they travel at sustained highway speeds, or with plenty of stop and go? Whatever their assignment, there are Delco-Remy extra-output generators and regulators job-matched to meet the electric power needs *exactly*.

**Delco-Remy** ELECTRICAL SYSTEMS

GM GENERAL MOTORS

FROM THE HIGHWAY TO THE STARS
DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA




# "The Yellow Pages gets us business direct from car owners and from service stations!"

**says Earl C. Brown, Jr., co-owner, El Paso Safety Lane, El Paso, Texas**

"With so many transients coming into town and the Fort Bliss Air Force Base nearby, lots of people around don't know El Paso. They rely on the Yellow Pages to find the services they need—and that's where our Yellow Pages advertising comes in. It makes it easy for people to find us!

"We get a lot of business through service stations, too. For example, a tourist stops at a service station and finds he needs wheel alignment. So the attendant, who may not know us, will say 'I'll look in the Yellow Pages.' And seeing our large ad there, he's likely to recommend us."

No matter where you're located, it's easy for customers to find you when you advertise in the Yellow Pages. People turn to the Yellow Pages when they *want* the services or products you offer. Send more of this trade in *your* direction by calling the Yellow Pages man at your Bell telephone business office. He'll help you plan a business-building Yellow Pages program.

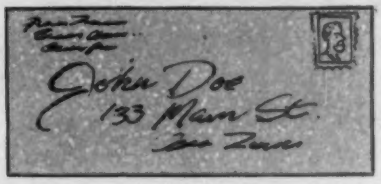



**LINING UP ALIGNMENT BUSINESS.** Display ad (reduced) under *Wheel, Axle & Frame Service* works hard for El Paso Safety Lane!

Find Us Fast In The Yellow Pages

**Display this sales-building emblem wherever your prospects can see it. The Yellow Pages representative will gladly supply as many as you need.**

# Letters to the Editor




### Brake Stations

Dear Sir:

I represent a group of dealers and service stations in this area that have grouped together to combat the $9.95 cut-rate brake stations. I read your article in March Motor Age issue of 1960 on "How to make a living keeping people alive." We would like to use the article in our local papers. Of course, we are wondering if your company would grant us permission.

*C. J. Palmer*
*Red's Brake Service*
*Syracuse, New York*

**Based on your written request, permission is granted. (Ed.)**

### Uniforms for Mechanics?

Dear Editor:

As you know, it is getting more difficult each year for the dealers, independent shops, and service stations to get competent service men, such as, auto mechanics, or body men, or Diesel mechanics. The two biggest causes of this shortage, actually, I believe are:

(1) Beginners too often can make more money in other fields, so the young men who might be mechanically inclined, are becoming construction workers, harvest workers, etc.

(2) In some people's mind, the skilled mechanic is not looked upon as being as high social position; such as, an engineer, a doctor, a lawyer, office worker, etc.

Within the next six weeks to two months, about sixty thousand pieces of advertising literature will go out to the high school graduates of Missouri, Iowa, Kansas, Nebraska, Arkansas, Oklahoma and to a limited extent, Colorado and Minnesota.



The enclosed Polaroid shot was taken to show you the new uniforms the students are going to wear. The students in school now may wear these on a volunteer basis, but later they will be required. Shall try to find trousers that are of the "Ivy League" styles, however. Want to get more of a professional appearance and attitude.

*Illeane D. Littrell, Pres.*
*U.S. Trade Schools*
*500 E. 11th St.,*
*Kansas City, Missouri*

### Debt Created from Debt

To the Editor:

Your editorial "Nobody Ever Went Broke Making a Profit" was my favorite belief until I saw it explode into the most disastrous 30 years since the Deluge.

When car dealers first began taking half-used cars in trade to get rid of new cars forced on them by easy credit mass-production, I was a truck factory troubleshooter. . . .

Now two used cars must be sold or be packed in used-car lots for every new car sale. . . .

In the process of looking for the loose screw in the automobile business, I found that schools have been teaching a lie ever since interest was legalized 400 years ago; namely, that interest makes money. Learned the hard way, interest is nothing but a debt created from a debt—now compounding about 5 billion dollars a month in this country. (Russia doesn't publish debt figures). . . .

*Robert E. (Bob) Lynch*
*Minneapolis, Minn.*

### Floor Plans Request

Dear Editor:

It will be greatly appreciated if you would send us a plan for our repair shop. We are undecided whether to have three doors in front (cross street side) and one at the side. We intend to have two hoists and one pit, but where to place them is the question. We are forced to move from our present location because the city is constructing an overpass. Our present property is 100 x 100 feet. Three hoists in the lube room and two hoists in the shops. We can place six cars in the shop and work on them fairly comfortably, besides having our equipment and testers. The size of our present shop is 40 × 54.

*Ah Tye*
*Stockton, Calif.*

**Sending some data that we hope will help. Good luck in your moving! (Ed.)**

# YOU NEED CONFORMABILITY

## IN PISTON RINGS...MORE THAN EVER BEFORE!

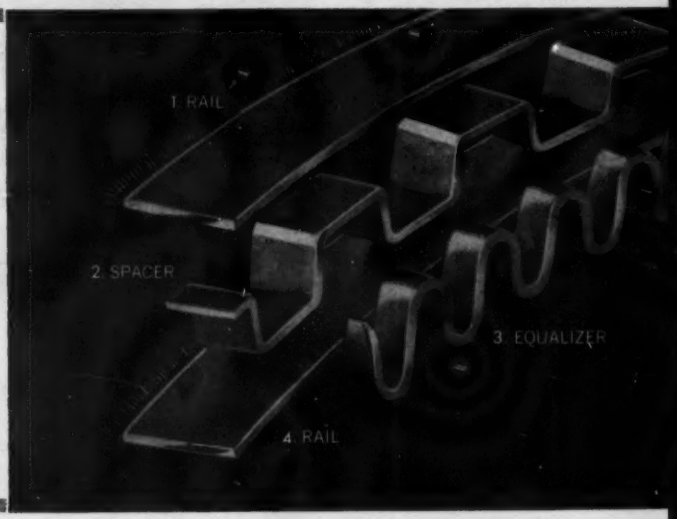
# YOU GET CONFORMABILITY TO A GREATER DEGREE IN PEDRICK FORMFLEX CHROME OIL RINGS

ONE REASON IS

## PEDRICK'S 4-PIECE DESIGN!

Pedrick's peripheral-abutment Formflex oil ring has an individual spacer and an individual "Equalizer", each of which is designed and constructed to work independently and to do its *own job* best!

Thus, Pedrick's 4-piece ring is as flexible and effective as possible, and the CONFORMABILITY which you get is unequaled.




DEPEND ON Pedrick FOR THE RIGHT RING JOB

*In addition,* PEDRICK FORMFLEX CHROME *Oil Rings are:*

- **Easy to install!**
- **All-purpose**—for any type of vehicle, for any kind of service!
- **Chrome-faced** for longer life!

WILKENING MANUFACTURING CO., Philadelphia 42, Pa. IN CANADA, Wilkening Manufacturing Co. (Canada) Ltd., Toronto 2

# Machine Shop's promotion vital door-opener to parts business

*AERA s executive vice president reports on shop problem trends and outlines Convention plans*



**By JAMES H. TEMPLIN**

**Executive Vice President, Automotive Engine Rebuilders Assn.**

The Automotive Engine Rebuilders Association will hold its Annual Convention in Cincinnati on June 2, 3, and 4. Much time and effort has been devoted to planning a timely program which will stimulate members' thinking on vital machine shop problems with the object of improving operations and pointing the way to profits.

The general theme of the sessions, "Tell 'Em, Show 'Em, Sell 'Em," will appeal to both small and large shop operations. A varied selection of subjects will be presented by qualified speakers and panels of experts will furnish answers to many shop questions.

Every segment of business has its problems. The automotive machine shop is no exception. Some shops slip in volume of work and become unprofitable when they neglect to change with the times. The Association is constantly confronted with the responsibility of indicating to its members new trends and new markets when old ones start to fade away. A feature of the Cincinnati convention will be the subject, "Tapping New Markets," a panel presentation which will explore four possible areas for new shop revenue.

Many jobbers having good shops with trained personnel and excellent equipment, are confronted with another problem. They find it difficult to devise ways to sell their potential customers on using their facilities. The promotion of a machine shop is essential to wholesalers because it is a door opener to all parts business.

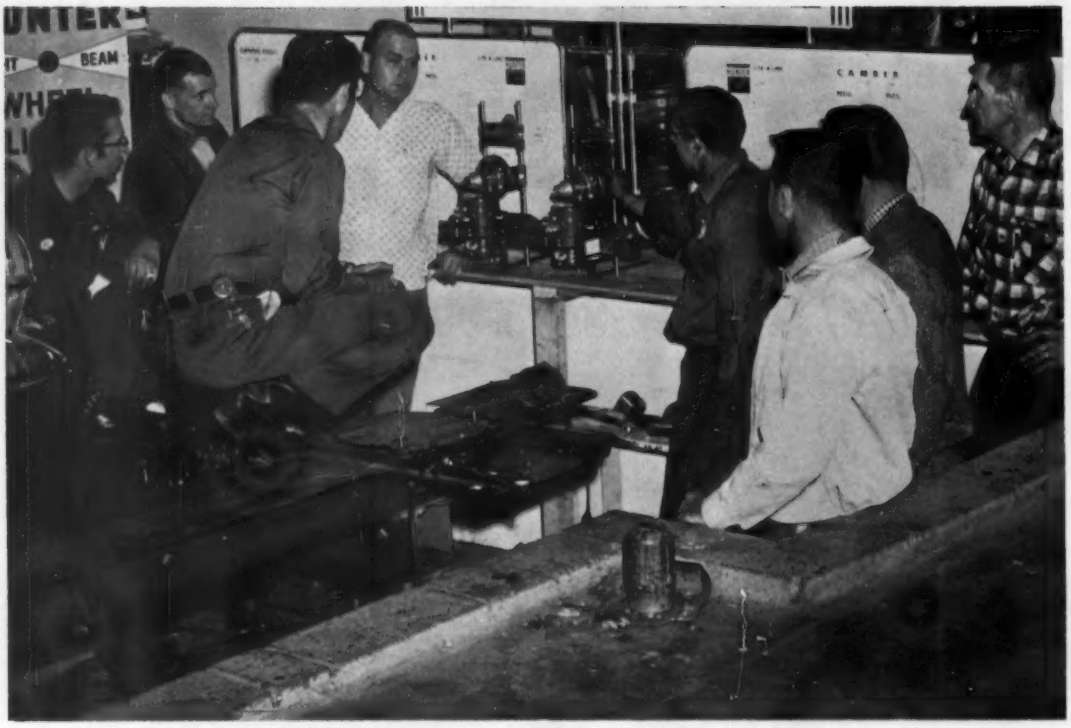
One important answer will be given on June 3rd, when Fred A. Lambert, a past president of A.E.R.A., will present, "How to Sell your Machine Shop Service." The highlight of this talk will be the announcement of a brand new promotion which will be sent to all members to assist them to "Tell 'Em, Show 'Em, Sell 'Em." The finished product is the result of a year of research and study by a committee of members who worked untiringly to achieve the answer.

### Reduced Number of Shops

A recent survey of Jobber machine shops indicated an additional serious situation. It reported that a number of shops have been greatly reduced in size or completely discontinued in the last 10 years. Reasons given were "high labor costs, intensive price competition, and the increasing availability of mechanical units and complete engines for specialized rebuilding firms."

Actually it is almost impossible to select any business which has not experienced higher costs, more competition, and new trends. This has been typical of all commercial enterprises in the past decade. Notwithstanding, many shops have become larger and more dominant in their trading areas in the same period.

*Continued on page VII*



Potential customers cluster around demonstrated shop equipment.

# Customer becomes instructor; helps sell Shop Equipment

*El Paso jobber demonstrates profit value of shop equipment at user's place of business*

LOU Cantrell, Cantrell Auto Supply Co., makes his headquarters in El Paso, Tex. Lou has been very successful in having his buyers of equipment hold schools. Also the buyers have been conducting classes of instruction for Lou's potential buyers of similar equipment.

Lou Cantrell puts it this way: "When a jobber realizes that between 20 and 25 per cent of his prospective buyers don't buy because they lack self-confidence to take on something new, then our method reveals its merit at once."

Lou explains that "one of our customers does the instructing —and in his own place of business." (And the customer uses the equipment he recently acquired from Lou.)

Another facet to this interesting merchandising approach is that Lou and his salesmen often encounter operators who have "bought equipment and claim they never received adequate instruction."

Some of this group feel they have been misled. They were under the impression the equipment would be easier to operate than they found in actual practice.



On-the-car test plus buyers own words makes strong sales message.

But when a satisfied user puts on the demonstration, the whole thing is seen in a different climate.

For one thing, the interested spectators know their instructor, a fellow like themselves. Consequently, the "operator-instructor" instills confidence in the others contemplating buying similar equipment.

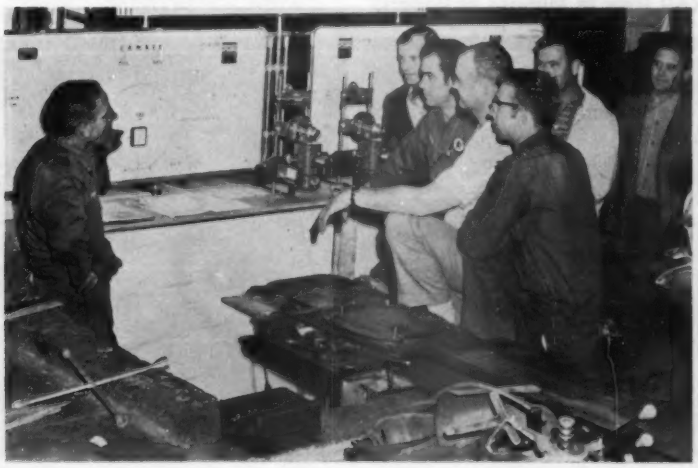
"It has also been easier to round up attendance at a fellow dealer's," Cantrell continued, "than at what appears to be a more formal school at our place of business. Too, many prospects have built up a 'school complex,' and deliberately shun them."

So far, Cantrell has had his salesmen limit the number of their prospects invited to attend one of these classes.

### Keeps Attendance Down

"If the number is kept down to 5 and 6," Cantrell stated, "it is the more successful for all concerned."

Generally, the "class instructor" is recent purchaser of equipment.



All these classes have been held during regular hours. And quite often the "instructor" has to excuse himself to take care of a customer, or help out an employee. When this occurs, the "students" discuss what has been explained so far amongst themselves. So when the "instructor" returns, he often is asked to clear up a point or two that one or two "students" had interpreted differently.

"They'll freely ask a fellow operator to retract, even argue with him," said Cantrell. "They wouldn't with a factory instructor."

Of course, the operator stepping into the role of "class instructor" includes the fact he knows the equipment.

"And it's assumed by all that he knows how to make money with it, too," Cantrell added.

### Equipment Makes Money

This making money with the equipment being discussed and explained, interests all concerned, as much, if not more, than the operational technique. And this phase of the deal gets batted back and forth until each one has the other's money making ideas. And this sways some to buy who otherwise wouldn't.

Strangely enough, not one who has bought new equipment hesitated putting on a school, with the reservation they might do more harm than good, by not having experience in "school marm" work.

"And their inexperience is the convincer that the class has NOT BEEN rigged," Cantrell concluded.

### Adding Equipment Lines

With the means to sell the 20–25 per cent potential he never had before, Cantrell is stepping out for more equipment lines he can feature. His six outside salesmen say this is the greatest boon to equipment sales they have ever had.

# THE PULSE OF AUTOMOTIVE BUSINESS

## Automotive Wholesaler's Sales Inventories

*Data from the Wholesaler's Sales and Inventories*

| Region | Per Cent Change in Sales: Feb. 1960 from Feb. 1959 | Sales: Feb. 1960 from Jan. 1960 | Sales: 2 Mos. 1960 from 2 Mos. 1959 | Per Cent Change in Inventories: Feb. 1960 from Feb. 1959 | Inventories: Feb. 1960 from Jan. 1960 |
|---|---|---|---|---|---|
| New England | −11 | − 6 | + 4 | + 7 | +6 |
| Middle Atlantic | + 6 | −10 | + 6 | +11 | +3 |
| East North Central | + 9 | +15 | +12 | .. | −1 |
| West North Central | − 2 | + 3 | − 6 | + 8 | 0 |
| South Atlantic | + 3 | − 2 | + 5 | − 9 | +1 |
| East South Central | + 3 | + 4 | − 3 | +10 | 0 |
| West South Central | − 4 | + 2 | − 5 | +16 | +1 |
| Mountain | + 9 | +14 | + 5 | + 6 | +5 |
| Pacific | +11 | + 3 | + 4 | + 4 | +7 |
| United States | +15 | + 2 | +11 | + 4 | +2 |

## Monthly Sales of Automotive Jobbers incl., Tire and Tube Wholesalers*

**All Data are in Millions of Dollars**

| Month | 1960 | 1959 | Per cent Change |
|---|---|---|---|
| Jan. | $374 | $ 352 | + 6.18 |
| Feb. | 383 | 333 | +15.01 |
| Mar. | ... | 375 | ... |
| Apr. | ... | 382 | ... |
| May | ... | 389 | ... |
| June | ... | 429 | ... |
| July | ... | 419 | ... |
| Aug. | ... | 405 | ... |
| Sept. | ... | 426 | ... |
| Oct. | ... | 439 | ... |
| Nov. | ... | 429 | ... |
| Dec. | ... | 379 | ... |
| Total—Year | ... | $4,769 | ... |
| Total—2 Months | $757 | $ 685 | +10.51 |

* Estimated by the Bureau of the Census.

## Monthly Sales of Franchised Car Dealers*

**All Data are in Millions of Dollars**

| Month | 1960 | 1959 | Per Cent Change |
|---|---|---|---|
| Jan. | $2,577 | $ 2,531 | +1.81 |
| Feb. | 2,659 | 2,450 | +8.53 |
| Mar. | ... | 2,921 | ... |
| Apr. | ... | 2,942 | ... |
| May | ... | 3,033 | ... |
| June | ... | 3,198 | ... |
| July | ... | 2,903 | ... |
| Aug. | ... | 2,772 | ... |
| Sept. | ... | 2,305 | ... |
| Oct. | ... | 2,956 | ... |
| Nov. | ... | 2,284 | ... |
| Dec. | ... | 2,177 | ... |
| Total—Year | ... | $32,472 | ... |
| Total—2 Months | $5,236 | $ 4,981 | +5.12 |

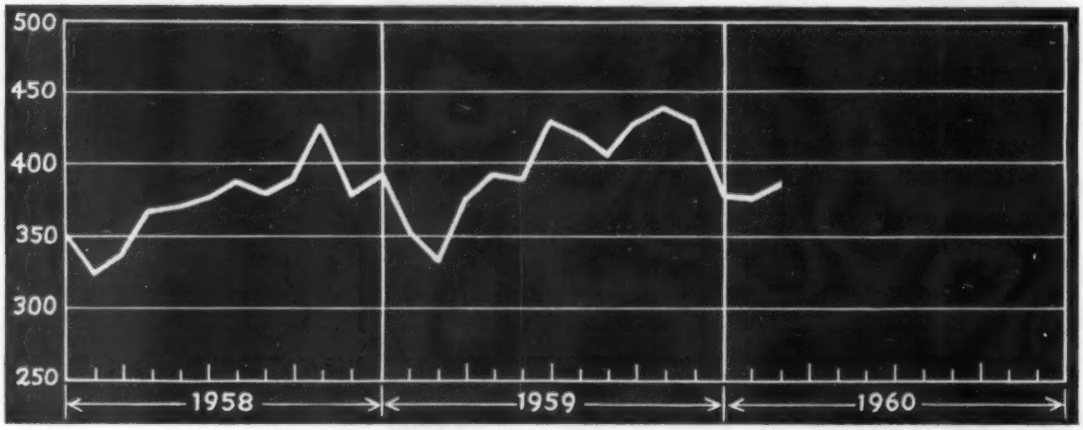
## Monthly Sales of Gasoline Service Stations*

**All Data are in Millions of Dollars**

| Month | 1960 | 1959 | Per Cent Change |
|---|---|---|---|
| Jan. | $1,386 | $ 1,282 | +8.77 |
| Feb. | 1,299 | 1,197 | +7.68 |
| Mar. | ... | 1,318 | ... |
| Apr. | ... | 1,348 | ... |
| May | ... | 1,427 | ... |
| June | ... | 1,450 | ... |
| July | ... | 1,516 | ... |
| Aug. | ... | 1,504 | ... |
| Sept. | ... | 1,419 | ... |
| Oct. | ... | 1,462 | ... |
| Nov. | ... | 1,433 | ... |
| Dec. | ... | 1,437 | ... |
| Total—Year | ... | $16,793 | ... |
| Total 2 Months | $2,645 | $ 2,479 | +6.70 |

## MONTHLY SALES OF AUTOMOTIVE WHOLESALERS INCLUDING TIRE AND TUBE WHOLESALERS

**(All Data in Millions of Dollars)**



# NEWSETTES

### Yost Named President of Gaul, Derr & Shearer

David Yost, well-known Philadelphia manufacturer's representative, has become president and treasurer of Gaul, Derr and Shearer, old established Philadelphia wholesalers. David Yost and Associates continues as a going business.



Mr. Yost, (see photo above) a native Philadelphian, has operated his manufacturer's agency for seven years. Prior to that he had seven years experience with United Motors Service. In World War II, as a Navy Lieutenant, he skippered PT boats in the South Pacific. He is a graduate of Temple University, Philadelphia.

Gaul, Derr and Shearer, now approaching its fiftieth year in automotive wholesaling, was founded with the purchase of the Gibney Tire Co. in 1911. George B. Shearer, one of the founders of the company, will continue as chairman of the board. Franklin P. Gaul, also a founder, will serve as vice president. Roy E. Chidester serves also as vice-president.

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### WILLIAM J. BAILEY

**W. J. Bailey, president of Bailey Auto Parts Co. of Macon, Ga., died April 15. Mr. Bailey, 63, established the firm bearing his name in July, 1930.**



**In attendance at the recent Grizzly Brake Division sales meeting held in Chicago were: Front row, left to right: John Heath, C. A. Laughren, W. O. Sanders, H. H. Swain (Director of Sales), V. L. Richards, H. M. Forester. Back row, left to right: K. W. Maxwell, C. W. Tremitiere, D. L. Coil, F. M. Dover, Jr., A. L. Clark, and Kenneth Stout.**

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### Meeting of Arkansas Automotive Jobbers

An organizational meeting of automotive jobbers in Arkansas will be held June 14, at the Hotel Marion, Little Rock, Arkansas. Interest in formation of a cooperative State-wide Association to serve State needs of wholesalers is high.

Speakers at the get-together will include Tom Payne, executive secretary of the Automotive Wholesalers of Oklahoma, Richard A. Melvin, of Automotive Service Industry Association and an automotive wholesaler.

Theme of the meeting will be the benefits to be derived from State organizations.

### Substandard Brake Fluid Outlawed in Kentucky

Effective September, 1960, the sale or use of hydraulic brake fluid below specifications of S.A.E. 70R1 will be illegal in the Commonwealth of Kentucky. A bill regulating the minimum standard of hydraulic brake fluid to be used in hydraulic brake systems of motor vehicles has been signed into law by the Governor of Kentucky. The bill, endorsed by the Department of Public Safety was promoted by the Kentucky Automotive Wholesalers Association.

The Department of Public Safety has been empowered to enforce this law and has been directed to establish minimum standards of brake fluid which meet the minimum standards established by the Society of Automotive Engineers for heavyduty type brake fluid or better designated as S.A.E. 70R1.



**James Lightburn, (above) vice president and general sales manager of Purolator Products, has announced that this year's Purolator Prizarama will be launched June 1 with over 2400 prizes to be offered.**

# NEWSETTES

*Continued from page V*

### AWDA President Speaks

Thomas S. Perry, Atlanta warehouse distributor and president of the Automotive Warehouse Distributors Association, was the principal speaker at the 3rd annual jobber booster meeting of Booster Club B-18, Philadelphia. More than 150 jobbers and boosters were in attendance at the Penn-Sherwood Hotel on April 18.

Mr. Perry described the position of warehouse distributors in particular and of warehouse distribution as a whole in relation to the entire automotive service industry.

He stated, that one of the principal responsibilities of an independent automotive warehouse distributor is to supplement the manufacturer's sales and service efforts in the field; to help the jobber to make better use of his working capital through increased stock turnover.

### Credit Disclosure

The Eisenhower Administration is split on the merits of credit disclosure proposal. Commerce Department strongly opposes passage. Agriculture Department urges passage. The Justice Department is neutral. Measure would require all finance, credit or carrying charges to be expressed in terms of simple annual interest. Merchants contend that it's unworkable, misleading and unnecessary.

### Ruberoid Expands Auto Products Division

Ruberoid Company has underway a major expansion program in its automotive products division. Additional equipment is being installed in the company's Joliet, Illinois plant for increased and more efficient production of automotive sound deadening materials.

A new finished product warehouse will be constructed at Joliet which will double the storage area for automotive products. The equipment phase of the program is expected to be completed in May of this year.

The new warehouse is scheduled for occupancy this Fall in anticipation of the 1961 model season.

### Plant Addition for P & D

In order to provide for growing business, P & D Manufacturing Co., Inc., has completed an addition to the Long Island City, N.Y., plant. It adds 30,000 square feet to manufacturing space.




**Bermuda-bound are these automotive jobber salesmen and their wives. The men were top winners in The Gates Rubber Co.'s recent Bermuda promotion. In addition to those winning the Bermuda trip, there were many other winners in the contest which offered a total of 150 prizes.**



**New research engineer for Mustang Replacement Engines is Frank Schmitt (above). His appointment was announced by C. A. Dunmore, executive vice president of the Texas firm in line with Mustang's policy of "assuring even greater quality control of its products."**



**Picture above was taken during the recent Credit Seminar of the Automotive Wholesalers of Illinois. Program was arranged by C. A. Anderson, Joe Vallero, and Lloyd Allen reports Harry L. Bellmer, AWOI executive secretary.**

## Machine Shop . . . . . *Continued from page 1*

A.E.R.A. for many years has pointed out that management itself can turn the tide. Shops which have reported a downhill slide, in many cases can find the cause in management's passive attitude toward the shop.

One Jobber answered a survey question, "Would like to drop shop completely. Consider it a necessary evil." This attitude is typical of an owner who obviously thought the shop in the rear of his place of business would run itself while he devoted all his energies and planning to the other aspects of his establishment. A.E.R.A. has been campaigning for years to rectify this "necessary evil" concept, consequently many of its projects and promotions are designed to alleviate this situation.

The previously mentioned survey also quoted another owner's words, "We operate shops in seven of our stores. We are adding shops in the rest of our stores. We wouldn't open a new store without a shop." It would appear that the difference between shop success and failure in many instances is reflected in management's attitude and direct interest in this area.

The small one and two man shops present unnecessary problems to automotive wholesalers in some cases. Many jobbers with smaller shops do not realize that they can have a strong ally in A.E.R.A. The name, Automotive Engine Rebuilders, might appear too imposing to them to seek membership benefits.

Actually the Association is the international clearing house for all automotive machine shop problems. Small shop operators should note that 50 per cent of A.E.R.A. members employ 1 to 3 men in their shops. Consequently the organization keys much of its activities to helping the small units succeed, grow, and expand. "How to Operate a One Man Shop" will be a convention subject which promises to create considerable interest.

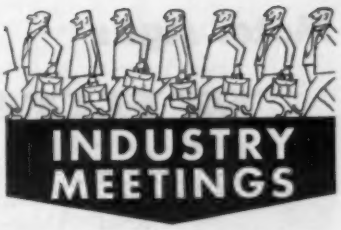
### Other Pertinent Problems

The lack of adequate automotive machinists being trained to supply the expanding needs for man-power; the increasing registration of imported cars and what the future holds for rebuilders in this field; continuous analysis of shop equipment and shop procedures to keep in tune with changing engineering and technical requirements; the maintaining of proper shop records to attain adequate profit and loss figures; the setting of pricing structures for shop labor; and keeping abreast of legislation and excise tax data which pertain to machine operations are other pertinent problems confronting our industry.

A.E.R.A. has pledged its efforts to the task of keeping its members informed and offering answers to the problems which exist, but are not insurmountable.



**Topping off recent Autolite sales parley in Toledo was presentation of special racing caps to each Autolite district manager. Above, Edmund T. Duffy (right), director of Replacement Sales presents cap to G. N. Sundstrom (Kansas City district manager). At left is D. M. Sharpe, W. C. regional sales manager.**




May 8–10—Fort Worth Auto Show, Will Rogers Exhibit Bldg., Forth Worth.

May 8–13—ASIA management institute, University of Illinois, Champaign.

May 20–22—New Jersey Automotive Jobbers Assn. convention, Colony Motel, Atlantic City, N.J.

May 22–27—ASIA sales management institute, Syracuse (N.Y.) University.

June 1–4—38th annual convention of Automotive Engine Rebuilders Assn., Netherland-Hilton Hotel, Cincinnati, Ohio.

June 20–July 5— 2nd annual International Auto Show to be held during 1960 Chicago Trade Fair, Navy Pier, Chicago, Ill.

June 20–22—Pennsylvania Automotive Assn., Bedford Springs Hotel, Bedford, Pa.

July 7–9—Independent Garage Owners of America 5th annual convention, Dinkler Plaza Hotel, Atlanta, Ga.

July 21–23—Automotive Trade Assn. Managers summer meeting, Grand Hotel, Mackinac Island, Mich.

Oct. 10–12—Automotive Parts Rebuilders Assn. annual convention, Conrad Hilton Hotel, Chicago.

Oct. 15–23—National Automobile Show, Cobo Hall, Detroit.

Oct. 16–21—American Trucking Assn. annual convention, Waldorf Astoria Hotel, N.Y.C.

Oct. 23–25—New Jersey Automotive Trade Assn., Chalfonte-Haddon Hall, Atlantic City, N.J.

Oct 28–Nov. 2—Florida Automobile Dealers Assn., Cruise to Montego Bay and Port-au-Prince.

## Motor Age's

# WHO'S WHO



**William J. Mericka** has been elected chairman of the Board of Van Norman Industries, Inc. He succeeds Donald P. Hess, who recently announced his retirement.

**John W. Lingle** has been appointed product merchandising manager for the Spark Plug Division of the Electric Autolite Company.

**Dale C. Krebs** has been appointed to the Service Sales Division of Chicago Rawhide Manufacturing Co.

**James H. Bennett** has been appointed to division sales manager, original equipment sales department of Walker Manufacturing Co.



**Dr. Frederick J. Port** has been elected vice president, Automotive Division of The Electric Storage Battery Company. Previous to his appointment he held the position of general manager of the division.



**Clifford Pountney, Jr.,** has been appointed research director of the DeVilbiss Company. He is a member of the Assn. of Heating, Refrigeration and Air Conditioning Engineers and of the Cleveland Assn. of Research Directors.

**Charles B. Eisenhauer** has been named general manager of the Electronics Division of Van Norman Industries, Inc.

**Kennard F. Miller** has been named manager of manufacture for the Carter Carburetor division of ACF Industries, Incorporated.

**Leo J. Stark** has been named general sales manager for Standard Motor Products, Inc.

**William C. Schuster** has been promoted to fleet engineer for Perfect Circle Corporation.

**John E. Dooley** has been appointed district manager by Dayton Rubber Company.

**James V. Stewart** has been appointed midwest-zone sales manager for E. Edelmann & Company.



**Charles E. Welch, Jr.,** left, has been named manager, Rubber company Sales and **Peter S. Innis** has been named a regional manager, National Accounts Division of Fram Corporation.

**Richard E. Riley** has been appointed manager of automotive specialty sales for Rubbermaid Incorporated. **Leo P. Cusick** has been appointed special field representative for jobber and distributor sales for the corporation.

**Alan E. Carlson** has been promoted to general manager in the Federal-Mogul Service Division of the Federal-Mogul-Bower Bearings, Inc.



**John W. Elbin** has been appointed vice president of manufacturing of AmForge Division of the American Brake Shoe Company. He will be responsible for manufacturing and product engineering at the Upset and Great Lakes plants.

**Thomas K. Wells** has been named by Arvin Industries, Inc., as sales manager of Arvin Replacement Exhaust Systems division.

**Robinson F. Barker** and **James F. Junge** have been elected members of Pittsburgh Plate Glass Company's board of directors.



**H. C. Morton** has been elected vice president of the Friction Materials Division of the Russell Manufacturing Company. He formerly was in charge of research and manufacturing in the friction materials division.



**Vincent F. Keilman** has been promoted to division manager of the Replacement Division, Wilkening Manufacturing Company. He will headquarter in Chicago and manage the Mid-West Division.



**Harry R. Mize** has been appointed vice president in charge of Replacement Sales of the Sterling Aluminum Products, Inc. He will serve Sterling and a subsidiary, Grapho Products, Inc.

MOTOR AGE

# newscoop

*Plans For '61 Cars*
*Aluminum Engines!*
*Low Car Scrappage*
*New Car Sales Up*
*Auto Financing Law*
*Boat Building Boom!*
*Improved Brake Fluid*

**In the days ahead . . . . HERE'S WHAT TO LOOK FOR ! ! !**

(Items gathered and edited by Ed Janicki, Bill Montgomery and Neil Regeimbal)

## Plans Underway For 1961 Car Introduction



THE 1960 MODEL SEASON has barely gotton underway.... But plans already are pretty well firmed up for introduction of 1961 products.... These plans will play a vital part in country's economy.

With the coming of National Automobile Show, all new cars from several divisions, and a host of new compacts, many auto executives are spending sleepless nights in conferences.... Production dates, sales targets, introduction dates are being constantly revised.... One company already has announced dates for the press preview of its 1961 models which, incidentally, is earliest date in history.

## Four-Door Convertible

THAT LONG-TALKED-ABOUT FOUR-DOOR convertible may become a reality next year.... Lincoln reportedly has such a model in the works for introduction later in 1961 selling season.... Lincoln has many surprises coming next year.... The convertible could be one of them.

## More Medium-Priced Series Dropped

MORE MEDIUM-PRICED SERIES will drop out of picture next year.... Among those to go will be De Soto Fireflyte.... The third series to be discontinued by that make within a year.

Hence, only name left in De Soto lineup next year will be Adventurer.... It will be available in three body styles with either the 361 or 383 cubic inch engine.... Reason for reduction in models is to eliminate constant overlapping of prices among divisions of one company.

## No Major Styling Changes For Compacts

NO MAJOR STYLING CHANGE IS PLANNED for any of the Big Three compact cars for 1961.... Exterior sheet metal will be carried over from 1960 versions, with only slight changes planned in grille work and chrome ornamentation.... An additional higher displacement engine will be offered by one of the makes as an option.

## Aluminum Engine To Be Produced



**Edward Janicki**
*Detroit News Editor for MOTOR AGE*

CHRYSLER HAS RELEASED ITS ALUMINUM ENGINE for production, Motor Age has learned.... Engine will go into production in July.... Initial production schedules call for 40 units an hour.... As far as is known, Chrysler thus will become first of Big Three auto makers to offer aluminum engines on current model standard cars.... General Motors has aluminum engines ready.... But they are not expected until end of the year.

Chrysler engine is not an "all aluminum" job.... Only cylinder block is aluminum.... Engine will continue to use a cast iron head.... However, Chrysler hopes to have an aluminum head ready for 1961 models later on in year.... Six-cylinder engines are lightweight versions of present 170 and 225 cubic inch powerplants.... They will be installed in the Dodge, Plymouth, Valiant and upcoming small Dodge Lancer.

## Leasing Business Grows

TREMENDOUS GROWTH OF LEASING BUSINESS was pointed up recently at annual meeting of National Assn. of Fleet Administrators in Detroit.... Byron Nichols, Chrysler vice president, noted that lease-and-rental business is currently accounting for 44 per cent of new-car fleet registrations, compared to 38 per cent in 1957.

In the truck field gain has been even more impressive.... Leased trucks account for 14 per cent of new-truck fleet registrations.... That compares with 9-½ per cent three years ago.... Both car and truck figures include only companies which purchase fleets of 10 or more units, so overall percentage is even greater.

## Tube-Type Tires On Way Out

FIRESTONE TIRE & RUBBER CO. predicts that within a few years tube-type tires for cars will be practically extinct.... Company makes that forecast despite fact that last year nearly half of the replacement car tires sold were of the tube-type variety.

Main reason for slow switch to tubeless, Firestone explains: nearly half of cars in operation today are pre-1955 models.... Those models were equipped with the tube tire and a majority of the owners continue to stick with them.... Another reason is that many repairmen have been recommending tube-type tires or putting in tubes to fix leaking tubeless tires.

## Low Car Scrappage Rate Reported

MORE PEOPLE ARE HOLDING onto their old clunkers.... According to R. L. Polk, there were only 2.76 million passenger cars scrapped last year.... The lowest in six years.... An additional 372,085 trucks hit scrap heap, bringing total to 3.1 million units.... That compares with a postwar high of 4.9 million vehicles scrapped in 1957.

Low scrappage rate last year sent country's vehicle population soaring to slightly under 70 million units. Total included 58 million passenger cars and 11 million trucks.

## Spring Upturn In New Car Sales

IT APPEARS THE LONG-AWAITED SPRING upturn in new car sales is here.... A sudden spurt in sales during final 10 days of March pushed total deliveries for first quarter to 1.5 million units.... About 14 per cent ahead of the like 1959 quarter.... New records were set by many companies during March.

If this is the bellwether for coming months, auto industry can look forward to a 7 million-plus car year (including roughly 500,000 imports) which it forecast early in the season.... That would be about 10 per cent above 1959.... It represents the second best year on record, topped only by 1955.

## "Bill Of Rights" For Small Business

A "BILL OF RIGHTS" FOR SMALL BUSINESS is being proposed by Sen. John J. Sparkman, D., Ala.... He says it should include: The right to have the door of business opportunity always open; the right to seek business success free from unfair competition and monopolistic practices; a tax system which encourages plowback of earnings into business modernization and expansion, and the right to a voice in government decisions.

## Schools May Get Surplus Auto Parts Free!

GOVERNMENT CONSIDERING MAKING SURPLUS auto parts available to schools free.... Department of Health, Education and Welfare now gives various scientific and technical equipment to schools.

Auto parts will be added if there's enough demand.... They're spare parts no longer needed by government.... Auto repair training teachers, school officials, would go through huge stocks, pick what they want, if program is adopted.

## New Law Controlling Auto Financing



**Neil Regeimbal**
*MOTOR AGE's News Editor, Wash., D.C.*

NATION'S CAPITAL WILL SOON have a strict new law controlling auto financing.... Aim is to stamp out few car swindlers.... Measure is supported by NADA as a "model" law for other communities to stop use of switched contracts, balloon payments, other gimmicks which hurt legitimate dealers.

Senate Finance Committee accepted House-passed measure, but passage was delayed by lengthy civil rights debate in the Senate.... Maximum finance charges range from $8 per $100 for new cars to twice that for cars over four years old. It allows local government to set rules covering size of down payments and repossession methods.

## Boat Building Boom

THERE'S BIG MONEY IN BOAT BOOM.... New federal statistics show manufacturers and repairers of boats shipped products worth $320 million in 1958.... Almost double the amount shipped just four years earlier.... Production of all type power boats totaled 280,400 in 1958.... Up from 177,610 in 1954.... Outboard production jumped from 134,000 to 238,000 during the period.

## Economy Run Boosts 6-Cylinder Car Sales

THIS YEAR'S MOBILGAS ECONOMY RUN, held last month will have an important impact on sales of six-cylinder cars in the standard low-priced field.... Since the run ended, sales of six-cylinder standard cars have moved upward at a surprising pace, one company notes.

Main reason is exceptional mileage yield the engines racked up during Los Angeles-Minneapolis run.... Overall average mileage for cars with conventional six-cylinder engines was 23.4 miles.... Only two miles less than yield for the 10 compact cars in the run.

Winner in compact class was a Rambler American, with an average of 28.4 miles per gallon.... In low-priced six-cylinder class, a Plymouth Savoy won the run with an average of 24.8 miles per gallon.

## New Standards Set For Highway Signs

MOTORISTS A FEW YEARS from now may use new highway signs to guide them through the mazes and warn of curves and hills.... U.S. Bureau of Public Roads is revising basic manual which has set standards for highway signs, signals, and pavement markings for 12 years.... It should be ready this summer.

## Dealer Get Reform In Tax Laws

CAR DEALERS WILL GET REFORM in their tax laws.... Proposal passed both Senate and House, although in differing versions.... President Eisenhower was expected to approve compromise between two measures.

Senate version cut spread for payment of taxes on funds in finance company reserve from 10 to 5 years.... Measure eases impact of U.S. Supreme Court ruling requiring dealers to make lump sum tax payments on some funds dealers never get.

## Chrysler Corp. To Sponsor Trouble-Shooting Contests

NEARLY 1,000 YOUNG STUDENTS who have demonstrated outstanding automotive mechanical ability will compete in sixth annual Chrysler Corporation Trouble-Shooting Contests.... They will be held in 16 cities throughout the country this spring.

Contests are designed to give recognition and honor to mechanically-minded vocational and high school students and to encourage more young men to enter auto industry.... Participating schools select mechanically proficient students to represent their school in contest.... This is done on a two-man team basis.... These teams from the various schools make up the contestants for the event.

## Improved Preservative Brake Fluid

AN IMPROVED PRESERVATIVE BRAKE FLUID for cars and trucks has been developed by the Army Ordnance Corps at Aberdeen Proving Ground, Md.... It avoids excessive corrosion and gumming of hydraulic brake parts stored in standard brake fluid.... It has an acceptable boiling point, and causes little deterioration of rubber.

Details, including formula, are available from the Office of Technical Services, U.S. Commerce Department, Washington 25, D.C., in OTS report PB 161096, for 75 cents.



Birds-eye view of some of the imports exhibited at the Show.

# The International Auto Show

*Americans had the chance of a lifetime to see and compare imports and compacts*



By WM. MONTGOMERY
News Editor

THE Fourth Annual International Automobile Show opened in New York's Coliseum last month. The public loved it. Sales and attendance records established at last year's show were smashed! The jam-packed aisles gave a carnival atmosphere to the week-long show. Elbowing their way from exhibit to exhibit were avid sports car enthusiasts, economy-minded family-men and luxury car admirers. All wanted to see, feel and ask about every aspect of the cars on exhibit.

The curious and the potential car buyers had an excellent opportunity to see over three hundred and eleven car models. They were exhibited in attractive and interesting settings, which were in keeping with the international flavor of the show. These many cars represented the products of 86 car manufacturers in all of the major automobile producing countries in the world.

On exhibit were compacts, economy cars,

*Continued on page 104*

**How to**

# STOP LOSING MUFFLER SALES

**By Frank P. Tighe, *Editor***



*'Look and Listen' on every car driving into YOUR place of business; don't let them drive away to the cut-rate shop*

"UNCONDITIONALLY Guaranteed"—"15 Minute Service While You Wait"—"Mufflers Installed Free." Are not these claims you come across frequently?

These of course are among claims of many of the muffler specialist shops that dot the country. And these claims have severely affected car dealers, independent garagemen and service station operators across the country who have learned to lean heavily on muffler profits to help keep their businesses in the black.

Car dealers, independent garages and service stations first became aware, then concerned and then alarmed as specialized muffler shops appeared on the West Coast. With the advent of the Hollywood muffler fad, these shops spread to all sections of the




You can fight back with weapons like prominent "A" boards telling public you offer muffler service.

U.S. Today they thrive in a gigantic muffler market. They may be viewed as a definite competitive reality.

**Introduction of Duals**

The big boom for the nation-wide outburst of the muffler specialist shop is directly traceable, however, to the introduction of the high compression V-8 engine and of dual exhaust systems as original equipment. The new engines required new fuels which left highly corrosive condensates in the exhaust. Duals were designed to decrease horsepower loss.

The result was faster getaways—at the expense of more costly exhaust systems. And these systems lasted only about half the life of earlier designs. This exhaust system revolution quickly spread to the rest of the automobile manufacturers. Consequently, muffler life, in general, was shortened for the benefit of increased motor efficiency.

Another result was an angry motoring public—resenting the increased cost and shorter life of exhaust systems—and ripe for exploitation by the so-called "lifetime guarantee" shops. And so, overnight we witnessed the resulting wave of specialized muffler shops. This wave swept over the muffler market, grabbing a large chunk of business which was waiting for someone with the initiative to really sell exhaust system work instead of merely waiting for it to roll in.

When complaints are made about the so-called "muffler shop menace" we are reminded of a service station operator who was complaining to a muffler manufacturer about competition from muffler shops in his area. A steady customer of his had recently bought a muffler from a muffler shop; he demanded to know what the manufacturer was going to do about it.

The manufacturer's sales representative reminded the dealer that his steady customer had probably been into his station about 90 to 100 times in the preceding 12 months. He had at least 50 chances to listen to the car as it drove into the station and out again. He had at least 50 chances to spot a rusted tail pipe as he pumped gas.

He lubed the car six times that year and could have checked the exhaust system in 60 seconds each time. He missed all those chances to find that muffler job. Or if he did find it, he didn't sell it. He let that muffler get so noisy that the owner drove out of his way to buy it at a place he'd never even seen before.

As in this case, almost every muffler installation made by a cut-rate installation shop is made solely by default—by the negligence, the inefficiency, the product and sales ignorance, the lack of motivation—of many of the 300,000 car dealers, garages and service stations who just "handle" mufflers and pipes.

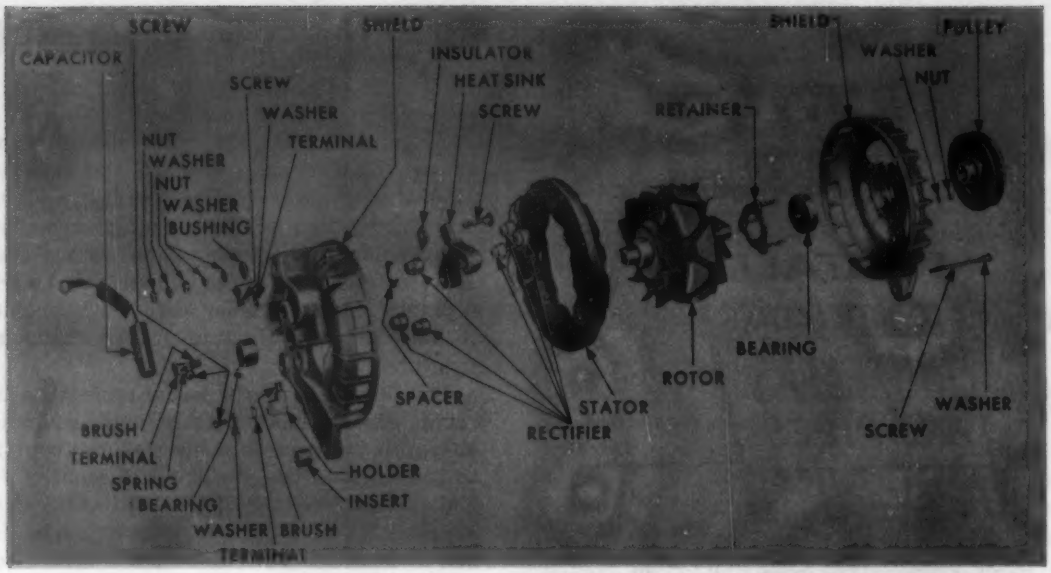
Much of the fault lies at the door of the independent dealer, the independent wholesaler and at the manufacturer's door.

Before you yield to the much-publicized sales weapons of the muffler shop—free installation, speedy service, lifetime guarantees and extensive advertising—take a good look at each of these weapons and see just exactly what you can do about them.

**"Free Installation"**

We recently heard of a typical example of how a dealer can most easily throw away a muffler sale. A steady woman customer was badly in need of a new muffler and told her garage mechanic she could get a new installa-

*Continued on page 100*




1. Exploded view of the Valiant alternator. Notice the twelve-pole rotor.

## Testing and Servicing the

# Valiant's ALTERNATOR

*The alternator on the compact Valiant of Chrysler Corporation as designed now, does away with current regulator & cut-out relay*

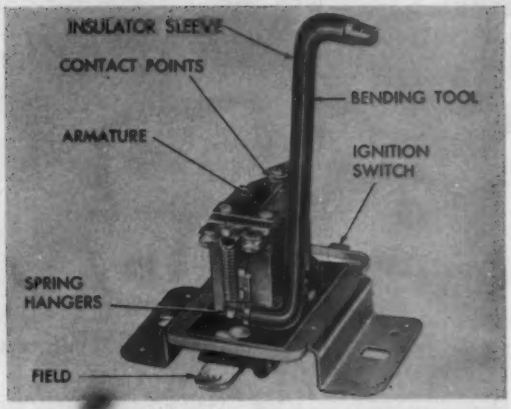


By TERENCE McCABE
Service Editor

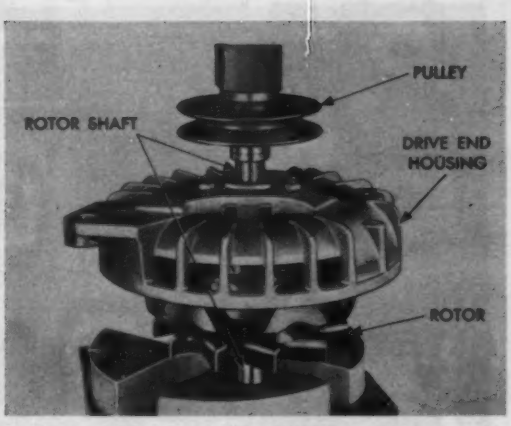
THE alternator, used as standard equipment on Chrysler's Valiant is made very much like other alternators available in the field. It is composed of the diode end housing, stator, rotor and the drive end housing with pulley. The machine, basically generates alternating current, which is rectified into direct current by six silicon diodes, mounted within the alternator assembly. This makes the unit completely self-rectifying and self-contained.

As with all alternators, the fields are the rotating part of the unit. Current is supplied to the fields by way of brushes. This current is direct current, and is generally supplied by way of a relay, from the ignition switch.

Field excitation is supplied not through residual magnetism, as is the case in a con-




2. Use of insulated bending tool to adjust voltage setting. Bend spring hanger up to decrease setting and down to increase.




3. Press pulley onto shaft while supporting opposite end of shaft. Never exceed a pressing pressure of 6800 pounds.

ventional type DC machine. In the alternator, the current is supplied directly from the battery to the ignition switch, to the brushes, then the fields. A voltage regulator is used to control the alternator voltage, at a pre-determined safe value.

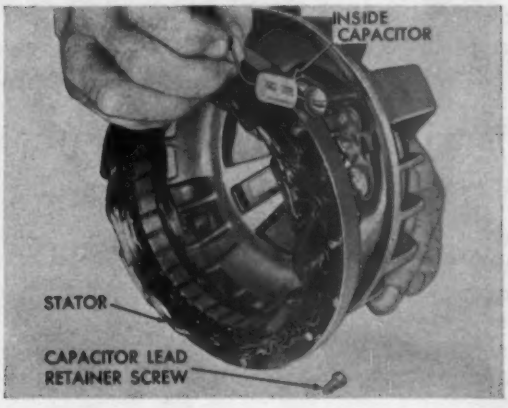
It is a double contact regulator and operates the same as other "B" circuit regulators. Exception—the voltage and field current is supplied from the battery through the ignition switch. The ignition switch actually disconnects the field current from the battery when the engine is stopped. It does this to prevent battery current draining back through the relay into the fields to ground.

Examine the wiring diagram in our illustration. It will be noted that the current from the alternator is brought over to the battery side of the light switch. From that point, the current is disbursed to the ignition switch and to the various accessories. The ammeter is placed so that the car ammeter would only show the current going to the battery.

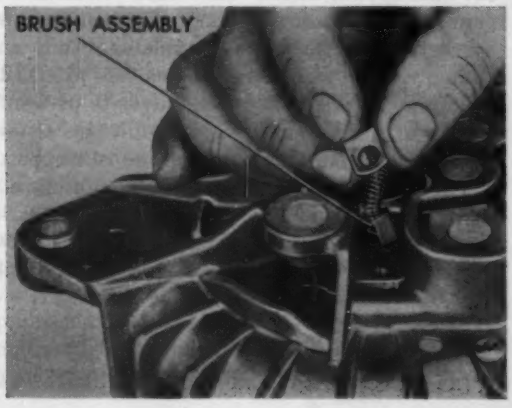
It does not show the total out-put from the alternator. The light and accessory loads when supplied by the alternator are not indi-

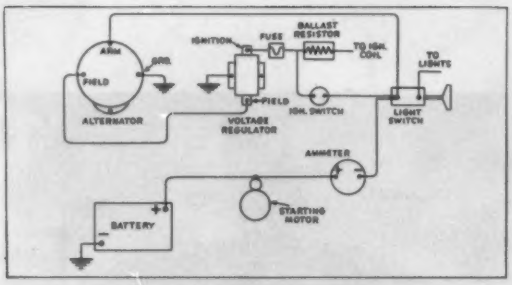
*Continued on page 42*

4. Removing the inside type of capacitor. Min. MFD .158.




5. Installation or removal of ground brush assembly.






**Alternator Circuit Winding Diagram**

## ALTERNATOR . . . . CONTINUED

cated on the car ammeter. Should the connected load exceed the out-put of the alternator it will show the difference between the output and the load, as a discharge on the car ammeter.

### Indicates Discharge

It will also indicate the discharge of any load turned on, when the alternator is not operating. You are cautioned never to connect the battery in reverse polarity, or possible damage to the diodes will result. In the event of road service: In starting a car with the booster battery, make absolutely sure that the polarity of the booster battery is correctly checked. Also look to see that the battery is hooked up properly before attempting to start the car, Or damage to the diodes may result.

Be careful in handling any of the wires at the alternator. (All wires will have battery voltage.)

In the alternator system, the conventional cut-out arrangement has been eliminated primarily because of the use of silicon diodes as rectifiers. The diodes (explained fully in January and February issues of MOTOR AGE) act as one-way check valves to prevent return of battery current through the alternator to ground, when the engine is stopped.

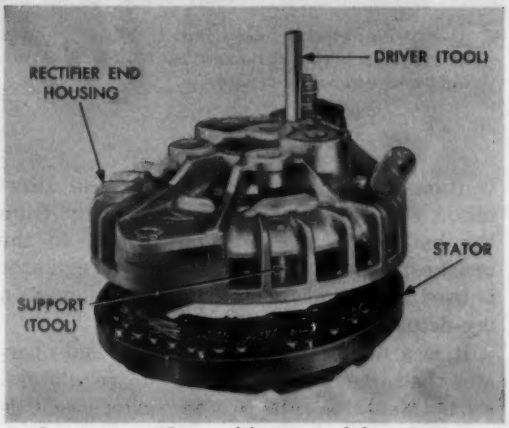
The current regulator has been eliminated mainly because of specially designed characteristics self limiting the output of the alternator stator. Therefore the only control necessary is that of the voltage regulator.

### Voltage Drop Check

In testing the alternator in the vehicle, first




**6. Insulated brush assembly inserted 90 degrees from axis of rotor.**

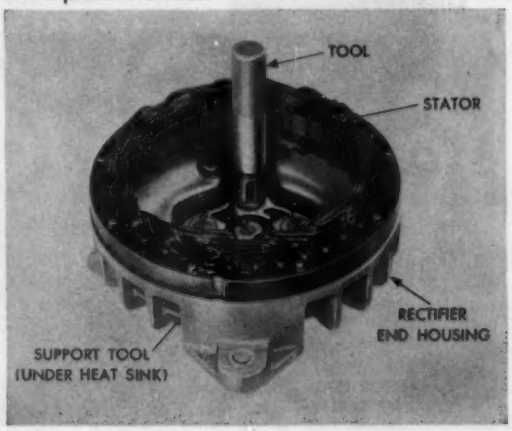


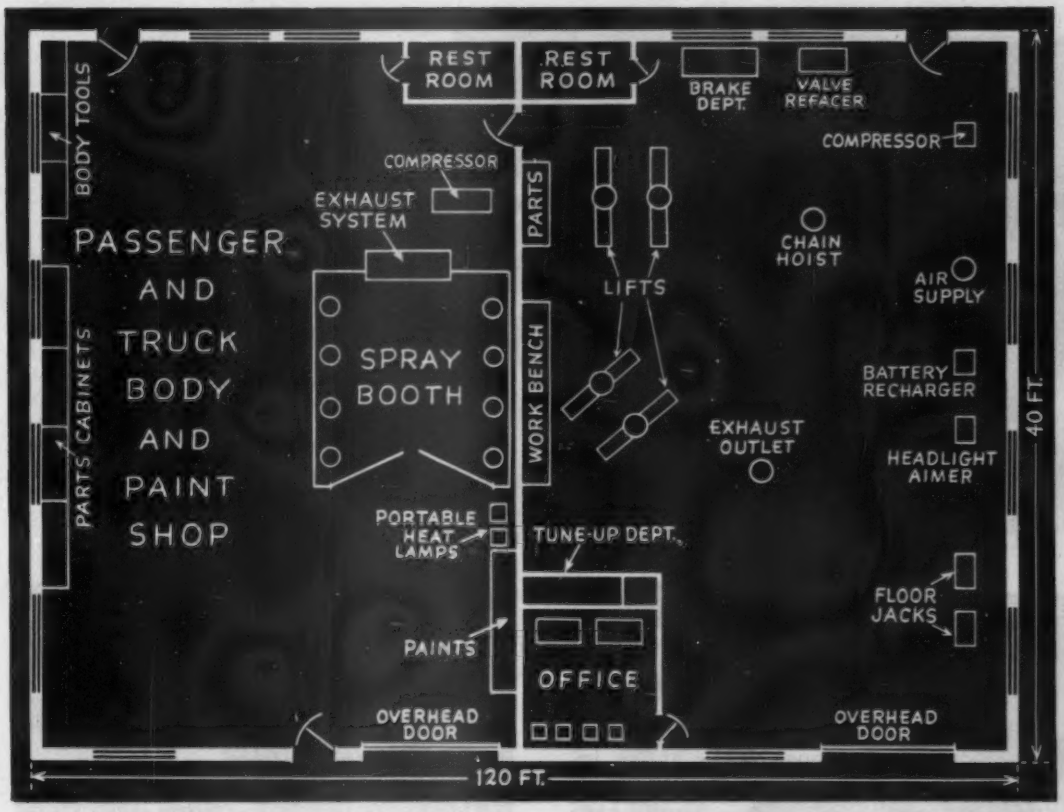

**7. Support rectifier end housing while pressing out diodes.**

start out with a fully charged battery in good condition. Your engine and alternator should be at normal operating temperature. Remember never to ground the field circuit

*Continued on page 63*

**8. Hollow tool with slot for wire clearance used to press in diodes.**






By William Montgomery, News Editor

# Shop Planning

*Good floor planning, equipment and trained mechanics made this repair shop a success*

PLANNING a shop which can handle both passenger cars and trucks? The floor plan above shows equipment and tool arrangement of Smith & Kerber, a successful repair shop located in Broomall, Pa. The length of the building is 120 ft. The width is 40 ft. The building is divided into two separate shops. Each is well lighted and ventilated to insure good working conditions. Wide overhead doors make easy traffic flow for cars and trucks coming in for service and repair.

The shop is equipped with the latest tools and equipment to handle both trucks and cars. In addition to the two owners, there are three well-trained mechanics, one helper and an office girl. The body and paint shop has the latest in spray and painting equipment. Three body men and one helper are employed to run this busy shop.

# Mechanical preview of the INDIANAPOLIS "500"

*Among safety rules stressed this year are Fiberglass coating of all fuel tanks and rear wrap-around bumpers . . .* by Ray Kay, *Pacific Coast Editor*

CHAMPIONS will chase champions in the 500-mile annual classic at the Indianapolis Speedway on May 30.

Everything is in high gear for another fastest and richest race in history. Racing enthusiasts all over the world are waiting for the event. They know that the 500-miler is sure to deliver the thrills.

The buzz boys are ready to go. Some 66 cars will battle it out for one of the 33 starting positions. It will take 143 mph. average speed to qualify.

Barring accidents, and given favorable track conditions, speed for the race should average 136 to 137 mph. And there's a good chance for a new one-lap record of 150 mph.

Roger Ward won last year's event with a record-breaking average speed of 135.857 mph. He took home $106,850 of the total $338,100 in prize money. This year's prize will be even bigger.

### Few Radical Changes

There are few radical engineering changes in the current entries. In fact, nothing really new has showed up at the Speedway in quite a while. Almost every car in the race has similar chassis and suspension. And almost all have mounted the good old workhorse, the 4-cyl. Meyer & Drake 255-cu. in. Offenhauser engine.

This year's race is the Novis' 15th try at Indianapolis. When racing car experts get together, they pretty much agree that these are the fastest and most powerful race cars today.

This reporter has information that if the Novis don't make it this year, they'll withdraw from Speedway competition.

Here's an up-to-the-minute rundown on what's new at the brick oval this year.

Safety gets a big boost. New U.S. Auto Club rules make it a must to have the following on each car:

(1) Rear wrap-around bumper
(2) A loop on the accelerator reaching over the drivers toes. It's so that the pedal can be worked if the accelerator springs fail.
(3) Fiberglass protective coating on all fuel tanks.

Meyer & Drake built nine new Offenhauser engines for the race. Six will go in the laid-over position, 18 degrees from horizontal. Three will be mounted conventionally. The laid-over engines use *Continued on page 63*

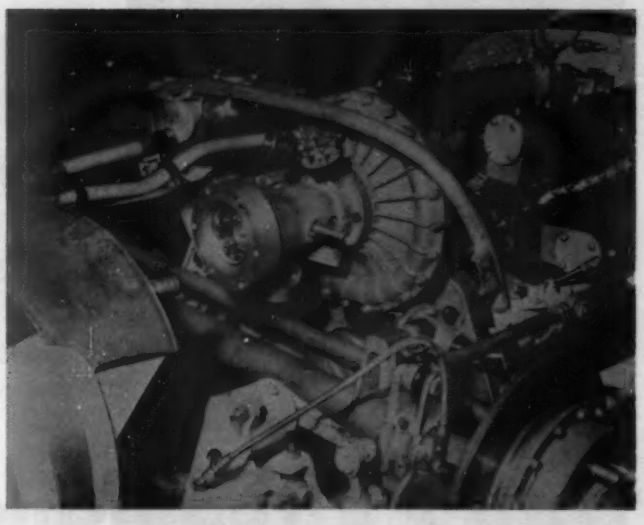
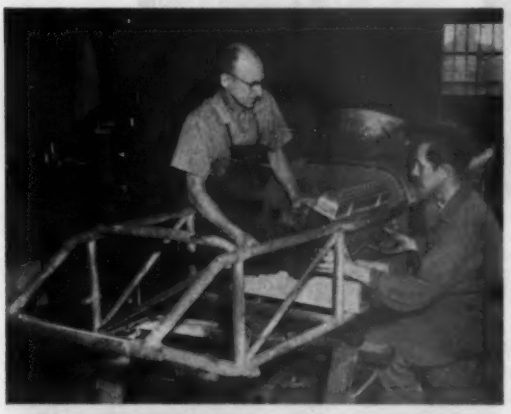
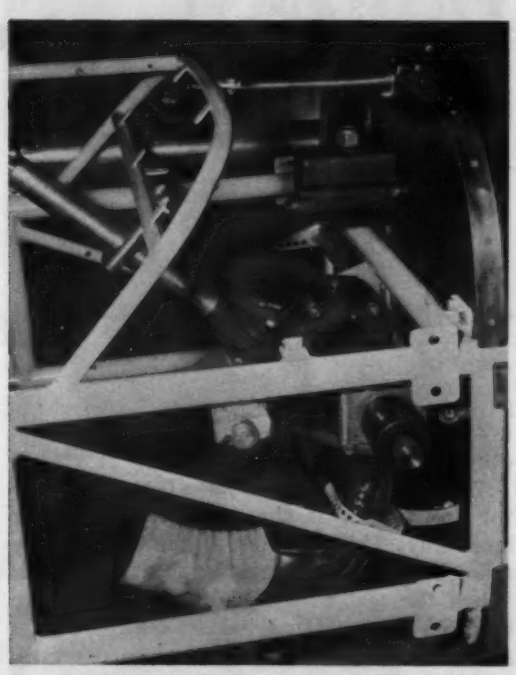


Photo at top right shows one of the major improvements in the Novi engine for 1960—mechanic Jean Marcenac's aircraft-type fuel injection system. Photo directly below show car builder Eddie Kuzma (left) and his assistant line up motor mounts of engine for the San Diego Steel Products Special.





A. J. Watson (above) puts aluminum nose section on one of his 1960 series. Car in foreground shows single unit Halibrand spot disc brakes and dual roll bars.



Above: Accelerator foot loop is mandatory on all cars in this year's race. It gives the driver a chance to work the pedal should pedal springs fail.



BY JACK MONTGOMERY
Technical Editor

*Ruined brake linings and accidents can be prevented by checking truck's grease seals and wheel bearings*

# TRUCKS | replacing oil seals and wheel bearings

WARM weather and summer driving are hard on grease seals and wheel bearings. These should be examined periodically and completely serviced. Neglecting them can ruin good brake lining or even cause a serious accident.

When the grease seals have been in service for any length of time, they become worn internally. This wearing action takes place from friction between the shaft and seal. When the seal runs dry of lubricant, wear becomes greater as mileage increases. The seals also loose their life. They become brittle and useless due to the heat from the brakes.

Most automobile and truck manufacturers recommend that wheel bearings be repacked with grease at least every ten thousand miles. When wheels are pulled for safety inspections and brake relines it is recommended that grease and oil seals be replaced. Generally disturbing the seal's position destroys its effective sealing ability. New seals are safe

*Continued on page 106*

Loose rear wheel bearings resulted in seal leak.





Left: Worn bearing & seal. Right: New, fully packed.



Impact wrench speeds wheel and bearing replacement.



Wrench locked between studs, turn wheel to tighten



Clean bearings in solvent. Blow off with dry air.

Positive bearing lubrications is most essential.



Press seal into position. Flush with hub boss.





This driver obviously was NOT sold a complete cooling system check-up.

# Stop cooling system failures!

## *Why let your customer experience road failure? Prevent it and profit by Cooling System Service*



By WM. H. WOLFE
Managing Editor

THE day of the Steamers has arrived at your front door. Hot weather and heavy traffic is taking a heavy toll on the week-end travelers. Heavy sludge accumulations in radiators and blocks restrict the flow of cooling water to maintain adequate cooling water flow for efficient engine cooling. The leaves and dead insects from last fall are still restricting the flow of air through the radiator matrix or core. All of these conditions your customer generally is not aware of. It's up to

YOU to set him straight for his own good.

Cooling system service can be offered along with other service operations. Springtime engine tuning, criss-crossing tires, lubrication, and appearance reconditioning can be offered. All of these go together with cooling system preventative maintenance like bread and butter. Speaking of bread, no one wants a half a loaf of bread when they can buy a full loaf at the same price. When servicing cooling systems it pays big profits to sell the full package. When your customers have cooling system casualties on the open road, they have the repairs made at the nearest service station or garage. This results in several conditions; first, you've got a unhappy customer next time you meet. Second, YOU lost the business that cooling system maintenance to his car could have brought your shop. Third, because of the inconvenience, expense and delay you caused this owner, HE may cause you to lose more than himself as a customer.

Sell them on the old adage, "a ounce of prevention is worth a pound of cure." Pressure test that cooling system. Replace the rotted and cracked rubber hoses. Pull and check the thermostat. Torque the cylinder head. Flush the cooling system with a suitable cleaning solution. Check that pressure cap and don't forget new hose clamps with new hoses.

There are other facets to cooling system service such as, fan blades and belts, water pumps, water distributor tubes, drain valves, welsh or core plugs and even the relationship of an air conditioning condenser to the radiator core. Your experience as a service man can best dictate the procedures that suit your operation.

**Causes of Overheating**

Other causes of cooling system overheating are frequently overlooked in the rush to flush em and fill em! By use of the pressure tester you can determine if there is a leak present in the cooling system and also check the effectiveness of the pressure cap valves and springs. All leaks should be corrected by replacement of the defective part. On today's high compression engines with steel shim head gaskets, most operators install a charge of cooling system sealer to effect a tight seal at the joint between the cylinder head and block. It is always advisable to replace all gaskets whenever a joint is separated for any reason. When replacing gaskets and hoses it is recommended that a suitable sealer be applied to the surfaces before securing in place.

Any sign of oil in the cooling system should be investigated thoroughly because it would indicate the presence of an oil leak in either the engine or the automatic transmission. In the case of an engine leak, it sometimes can result from a cylinder head not being properly torqued. As for the automatic transmission, it could mean a ruptured cooler which would allow the transmission oil to flow into the engine cooling system and thus destroy the transmission. Transmission oil will flow from the transmission to the engine, because transmission oil pressure is greater than cooling system water pressure. When the engine is stopped, oil pressure in the transmission drops to zero thus allowing the static water pressure in the radiator to flow into the transmission through the ruptured cooler. This condition gives a mixture of oil and water in both systems.

Last, but not least, you should investigate the new methods of selling a permanent package installation of anti-freeze that is now being introduced by several manufacturers.

**Cooling system profit items**

| | |
|---|---|
| Cleaning solution | Fan belts |
| Rust inhibitors | Fan blades |
| Thermostats | Water pumps |
| Gaskets | Water filters |
| Drain valves | Anti-freeze |
| Welsh plugs | Year-round fluids |
| Radiator hose | Pressure caps |
| Heater hose | System sealer |
| Hose clamps | Gasket sealer |

Better Management

# How Wisconsin dealership handles Accounts Receivable

WORD comes from a Wisconsin new car dealership that a very satisfactory method is being used there to handle accounts receivable.

The report comes from Robert Menzel, business manager at Ted Lauck Chevrolet Co., West Bend.

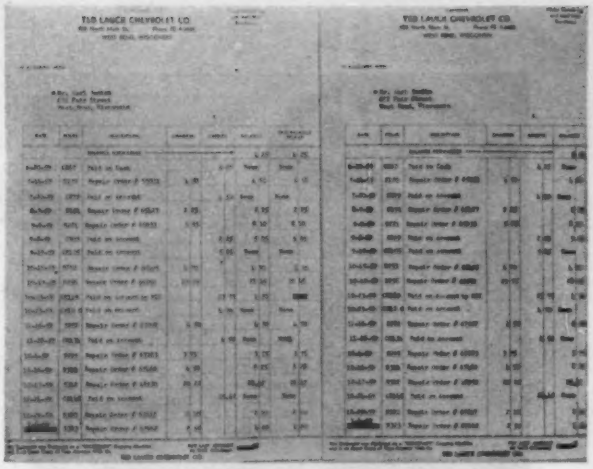
"We used to spend 12 hours a month preparing 350 statements," says Menzel. "Since we adopted the use of an electrical copy machine, the same work only takes about four hours."

In addition, the firm reports saving another ten hours of clerical effort each month. The machine is used again for other copying chores. These include making duplicates of new car warranties, used car inventory lists. Also it includes repair estimate copies. And also copies of repair bills and letters of business correspondence.

Below: Front view of dealership of Ted Lauck Chevrolet, West Bend, Wisconsin.



# *Electrical copy machine aids quick rendering of customers statements*



**At right: Close-up view of original ledger card—next to machine's copy (far right) which is statement sent customer.**

Here's how this particular dealership prepares their statements:

Prior practice was to hand-post charges and credits daily onto statement forms. At the same time, they were posted onto ledger cards by using carbon paper. Balances were continually maintained.

### Statements Sent Customers

On billing day, statements were sent to customers. The ledger cards themselves were kept as permanent records.

Under this system, names and addresses had to be typed each month; ledger cards had to be lined up with statements; and statements had to be separated from carbon paper.

In addition, figures on ledger cards often were illegible because carbon paper was smudged. And when ledger cards and statements weren't aligned properly, figures would be posted on top of other figures.

**Below: Robert Menzel, business manager, watches girl make duplicate of ledger card on the electrical copy machine.** (Photos—Minnesota Mining & Mfg. Co.)



"Now we use a typewriter to post charges and credits directly to master ledger cards. Balances are kept up-to-date. On billing day the ledger cards are run through the copying machine. Copies are sent to customers. The ledger cards are returned to our files," Menzel stated.

"The same ledger card is used each month, providing a detailed statement of account every time a customer receives a bill. Also, no errors can be made because the machine copy is an exact duplicate of the master ledger card," Menzel said.

"Another advantage is that our copying machine can easily be operated," Menzel says. "The operator starts the device by pressing a button; then inserts the original document along with copying paper. Both emerge from the machine about four seconds later."

Ted Lauck Chevrolet also finds that savings are afforded by making copies of:

NEW CAR WARRANTIES—The war-

*Continued on page 103*

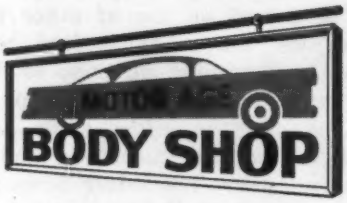


After clamping, quarter panel is set in place with blind rivets eliminating the need for applying heat.



Attaching convertible quarter panels without use of heat considerably speeds up assembly operation.

# Body Shop Time Saver in the use of Rivets

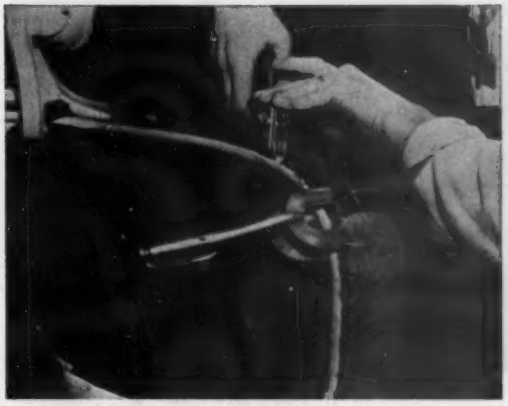



*Blind-type rivets speed body panel replacement jobs without distortion*

PROGRESSIVE body shop operators are always on the lookout for new and profitable ways to accomplish their daily repair tasks. Any method that will speed up the body repair operation should be investigated to the fullest by every alert bodyman. Blind-type rivets were originally developed for the aircraft industry. They are now popular in a wide variety of basic industries and emerge as a new ally of autobody and fender repair shops.

Art Hoffmann Buick, Incorporated, in Kansas City, Missouri, has uncovered a number of applications for the rivets. According to Gene Long, body shop manager and President of the Autobody Repair Association of greater Kansas City, they use blind rivets in many body shop operations. They've used rivets in assembling the bonnet surround panel to the British Austin Healey. This panel makes up the hood opening and complete front-end metal with the exception of the fenders on the Healey. All attaching is accomplished by use of rivets on this all aluminum panel.

The rivets enable a workman operating from one side of the work only, without access to the other side, to fasten a wide range of metal thicknesses with the use of a simple hand tool. The tool operates like a common



A simple and uncomplicated hand tool sets the rivets through new panel & old quarter panel lip.



Use of blind rivets in the job of attaching headlight retainer brackets is a 30-second operation.



Above is another feature of blind rivets. Rivet joining of quarter panel flange to door pillar.



Speedy attachment of the Cadillac hood bracket is done without access to the other side of the work.

pair of pliers. The clinching action of the rivets exerts as high as 600 pounds' squeeze between parts and results in vibration-proof fastening. The rivet method can be used in places near the gas tank without the danger of fire due to flashing of a flame near an open gas tank filler or vent.

A common repair job is the replacement of a rear quarter panel on a car. After the damaged metal panel is cut away, leaving a lip to which a new section can be joined, clamps can be used to hold the new panel in place while drilling and riveting operations are performed. The possibility of metal buckling from the effects of welding is eliminated. It is no longer necessary to remove a nearby window to prevent it from cracking from the heat.

For basically the same reasons, the molding around a convertible top is installed with rivets. Danger of fire damage when torches were used was a problem for this job because of the proximity of the work area to the fabric top and the plastic rear window.

*Continued on page 120*

# MAJOR Engine OVERHAUL | AUSTIN A-30

*Why not look into the opportunity of major service work on engines of Imported Cars?*

By TERENCE J. McCABE, Service Editor

THE imports have been here since around 1948. Many of them of that vintage are still around. Much mileage and lack of service in their early years are taking a great toll on the imported engines. Many of their owners think enough of these cars that the cost of a complete engine overhaul is not out of the question, as it is with similar vintage domestic units.

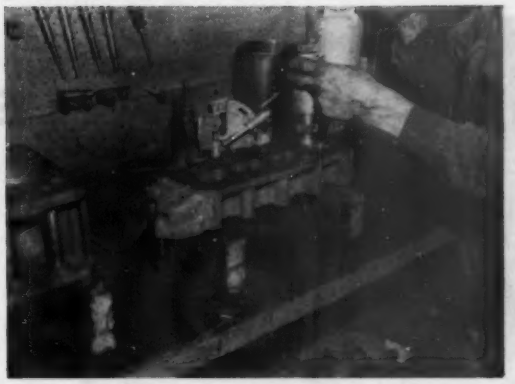
Many shop men turn them down on overhauls because they feel they may have trouble getting parts. Others turn them down because of lack of knowledge on imported engines. The car owner doesn't generally go back to the dealer because they are so few and located at quite a distance from his home. He then tends to depend on his service being done by his local service man, who also services his American car. He has faith in you as a fine mechanic, and thus trusts your every effort to help him.

Engine overhaul on the imports is easy and really very simple. Most engines are of the four cylinder, overhead valve, four stroke cycle type. There are some two cycle jobs, and some flat head, (L-type four cylinder engines in the Roots and Ford group cars). Most engines are water cooled and some are air cooled. In every case they are simply internal combustion engines and as such are much like any other engine.

### What Is the 1st Step?

The first step in overhauling any engine is to decide how far you and the owner intend to go in completing the job. Perhaps, just a valve job will be required. In that case the operation generally can be accomplished simply with the engine in the frame (except the VW and Porsche).

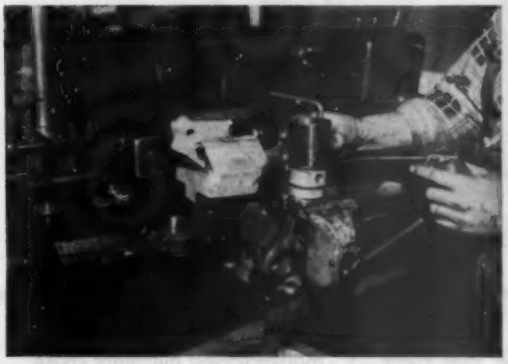
Should anything more extensive than valves be required; then the engine should be removed from the frame. MOTOR AGE's Fix Fax, (April issue) will be indispensible in supplying the specifications for all the im-



Grinding the cast iron seats is an excellent method of assuring accurate and effective valve seating.



For accurate boring, center the bar using the unworn part of the cylinder wall at the bottom.



All parts should be thoroughly oiled before installation.



Valves should be spotted-in as a double-check on effective seating.

ports. In addition the imported car maker, in many cases will be happy to supply you with shop manuals for their various models, at a very modest price. The addresses of any imported car manufacturer will be gladly supplied by Motor Age.

As for parts, you'll find that many domestic manufacturers make and merchandise such items as bearings, rings, pins, gaskets, points and condensors. All items can be obtained through your local jobber or from your nearest imported car dealer. In some cities, imported car parts distributors and jobbers have been set up, that sell imported parts exclusively.

Generally, your regular hand tools will be satisfactory for most operations on all the imports produced by Great Britian. The units

*Continued on page 72*



Rod and wrist pin alignment is very important on small engines in view of the close tolerances.

# WHAT to look for when you run into TROUBLE

*Faulty fuel pumps can make cars perform poorly and burn excessive amounts of gas*

By William M. Montgomery

## *The Problem . . . . . .*

### Poor idle

*Check for:*

a. Too lean mixture
b. Too rich mixture
c. Incorrect idle mixture adj.
d. Idle adj. needle grooved
e. Idle air bleeds restricted
f. Idle discharge holes restr.
g. Idle discharge holes not in proper relation to throttle plates
h. Air leak between carb & manifold
i. Air leak at throttle shaft

### Poor acceleration

*Check for:*

a. Excessively lean mixture
b. Too rich a mixture
c. Incorrect pump stroke
d. Accelerating pump fuel inlet valve not seating
e. Low fuel level or float setting
f. Restriction in accelerating pump discharge passage
g. discharge ball check or needle not coming fully off its seat
h. High fuel level or float setting
i. Malfunctioning automatic choke
j. Excessively dirty air cleaner
k. Incorrect accelerating pump stroke adj.

### Poor performance caused by lean mixture

*Check for:*

a. Low fuel level or float setting
b. Restriction in main fuel passages
c. Sticking needle valve
d. Low fuel pump pressure

### Poor performance caused by rich mixture

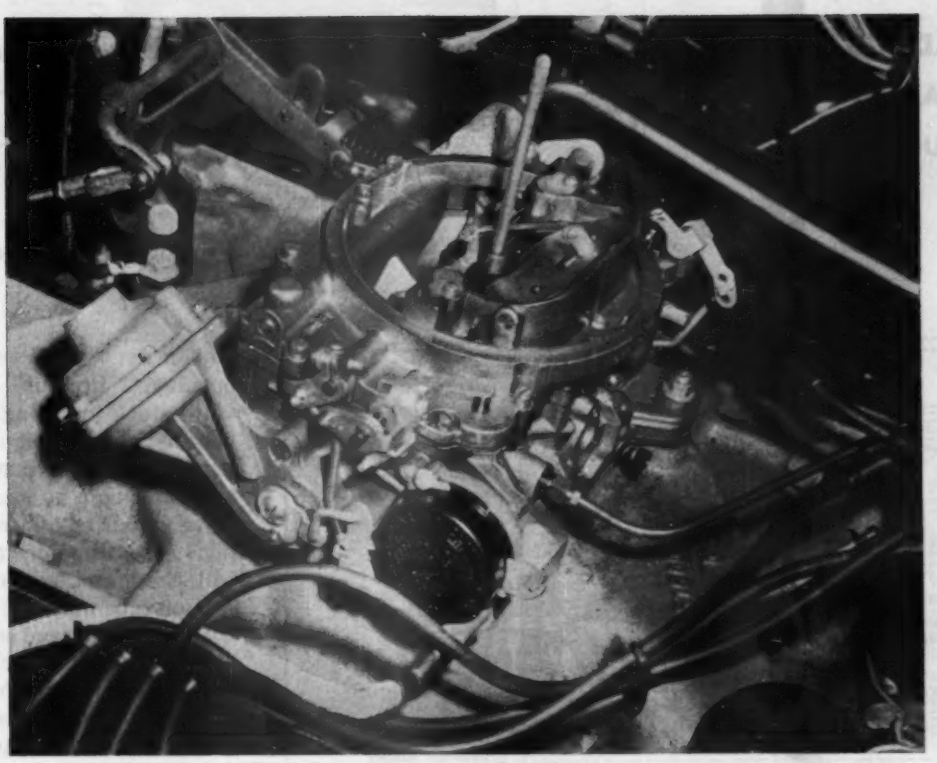
*Check for:*

a. Excessive dirt in air cleaner
b. High fuel level or float setting
c. Fuel inlet needle not seating or worn needle
d. Power valve leaking
e. Restricted air bleeds
f. Worn or damaged main metering jet
g. Accelerating pump discharge ball check and/or weight not seating properly
h. Fuel pump pressure excessive
i. Fuel siphoning from secondary fuel system

### High fuel pump pressure

*Check for:*

a. Spring too strong
b. Flange gasket missing



**Low fuel pump pressure**

*Check for:*

a. Diaphragm stretched
b. Spring weak
c. Sediment bowl dirty
d. Rocker arm worn
e. Excessive clearance between rocker arm, vacuum link & fuel pump link
f. Fittings loose or cracked
g. Fuel line cracked or broken
h. Leak in diaphragm
i. Valve improperly seating
j. Dirt in fuel tanks or lines
k. Fuel tank vent restricted

**Fuel pump leaks fuel**

*Check for:*

a. Main body retaining screws loose
b. Diaphragm defective
c. Fittings loose
d. Threads on fitting stripped
e. Body cracked

**Fuel pump leaks oil**

*Check for:*

a. Pull rod oil seal defective
b. Fuel pump mounting bolts loose
c. Mounting gasket defective

**Fuel pump noise**

*Check for:*

a. Mounting bolts loose
b. Rocker arm worn
c. Rocker arm spring weak or broken

**Loss of booster pump vacuum**

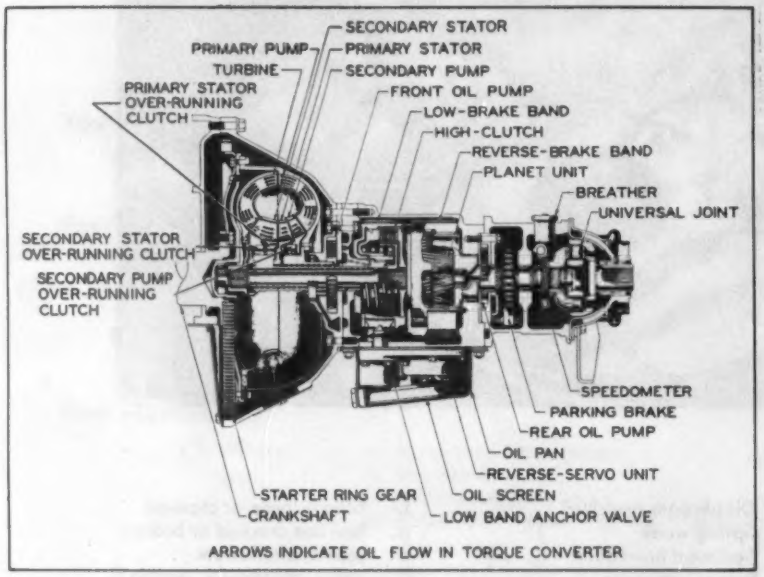
*Check for:*

a. Vacuum pump cover retaining screws loose
b. Valves not seating properly
c. Spring weak
d. Diaphragm defective

READER'S CLEARING HOUSE

# MOTOR AGE CLINIC for troubleshooting

BY JACK MONTGOMERY, TECHNICAL EDITOR




### Dyna-Flow Transmission Slipping On Acceleration

*I have trouble with a 1949-51 Buick dyna-flow transmission slipping on acceleration in drive. If you start fast it will slip. Then if you leave accelerator back and start pickup slow, it pulls fairly well. When the transmission oil is cold it pulls better than when the oil warms up. Transmission will not slip in reverse or low, hot or cold. On pulling transmission down everything was as clean as new parts. I checked oil pressure on front and rear pumps before taking it down and it was up to specifications. This transmission seemed to slip before take down up to about 50 mph. After reworking and when oil was cool it seemed to work normally. Then after driving till oil temperature came up it would be slow on acceleration till about 20 mph. Now after having driven it some more miles it slips badly on acceleration in drive. It gets so bad sometimes that you have to drop into low to start and shift up.*

*J. L. Draeger*
*Blue Island, Ill.*

IF THIS transmission operates satisfactorily when cold, the trouble is probably due to a leak in the valve body or the suction tube. I would suggest checking the following items. Loose valve body to case bolts. Rough or scored transmission case. Make sure the copper washer is installed in correct position. This washer belongs under the center bolt next to the suction pipe opening. Pressure regulator valve stuck in casing. Bleed orifice in pressure regulator valve plugged. High accumulator internal leakage at gasket. Direct drive clutch ball check not seating. Also reaction flange case ball check not seating. The oil suction tube may not be lined up with the gasket and suction port. If type with lo-anchor piston make sure piston is free as oil to main drive clutch passes around lands of low anchor piston.

### Pontiac Starves Out When Throttle Is Wide Open

*I have a problem on a 1959 Pontiac. It seems to starve out when the throttle is held wide open. For instance, if you were to start out real fast it would jump right up to about 40 mph and then quit. The engine has been tuned to specifications and the float level is correct.*

*Bert Parsons*
*Modern Motors*
*Phila., Pa.*

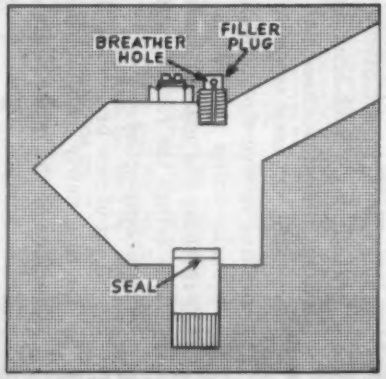
THIS sounds to me like a faulty fuel pump or a clogged gas line. I would suggest checking the fuel pump pressure. Also blow out the line from the pump to the gas tank. If this car is equipped with an in-line gas filter it may need replacing. I have seen cases where this filter clogs and restricts the flow of gasoline to the carburetor. It would be a good idea to replace this type periodically in any case.

# $7.50 CAR and TRUCK PAID FOR EACH KINK USED shop kinks

### How To Prevent Steering Gear Seals From Leaking Oil

*Verne Ritchie, 311 North Pacific Ave., Glendale 3, Calif.*

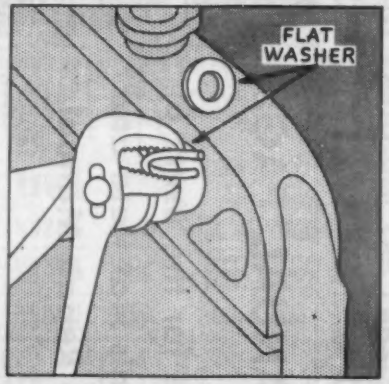
**53.** I have had continual trouble with '56 Chevy steering gear oil seals that are leaking. In one particular station wagon I installed four seals with no success. Then I decided to try a breather hole in the top of the steering gear box as shown in the illustration. This stopped the leak.




### Easy Way To Remove Spring Type Radiator Hose Clamps

*Arvid Gerken, 736 View Place Drive, Cincinnati 24, Ohio*

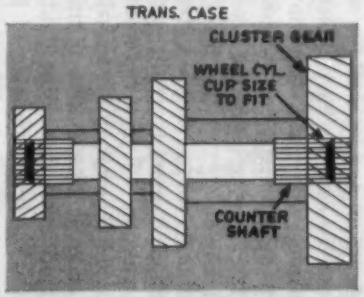
**54.** Removing and replacing spring type radiator hose clamps can be done very simply by using a standard pliers and a half inch flat washer. Compress the tongs of clamp with pliers and confine them by placing washer over the tips. Release the pliers and the washer holds the clamp in an expanded attitude for removal and replacement.




### Helpful Idea When Working On Transmissions

*Joseph J. Badgeley, 84 Tower St., Huntington Station, L.I., N.Y.*

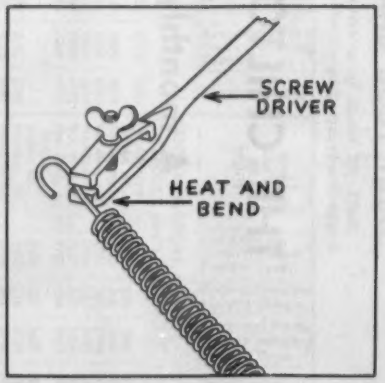
**55.** Here is an idea that I have used for years on transmission work. I use this in order to keep the needles in place in the gear cluster when assembling the transmission. I use two wheel cylinder cups just the size to fit the hole that the counter shaft goes into, putting the taper the way I wish to push the shaft. This allows the cups to be pushed out easily, leaving the needles in place.




### Spring Gripping Tool To Stretch Compression Springs

*Charles Willey, Rt. 7, Penacook, N.H.*

**56.** The sketch shows how one can make from a regular screw driver, the spring gripping tool, to stretch or expand compression springs to attach or hook into place. Just heat and flatten the shank of a good size screw driver. Offset it and form the lower jaw. Make the upper clamp type jaw. Drill and tap for the wing screw.



# THE CHILTON MANUAL PAGE

**A monthly service for the users of Chilton's Flat Rate and Auto Repair Manuals**



By

**Paul A. Murphy**

Editor of

Automotive Manuals

## Hydraulic Tappet Noise

We have been advised that some shops are mixing automatic transmission oil with crankcase oil as a cure-all for noisy hydraulic tappets. To date we have talked with several mechanics who claim they have mixed two quarts of automatic transmission oil to three quarts of engine oil at the drain period with some success.

Actually, we feel this is a step in the wrong direction. It must be realized that automatic transmission oil is not recommended as a motor oil. The oil additives are not designed to handle engine sludge normally found in automotive engines. Since automatic transmission oil is not capable of handling combustion sludge, it is only a matter of time before the accumulated sludge messes up the inside of the engine.

Oil additives have been most helpful in keeping hydraulic tappets free from dirt. But, if dirt becomes lodged under the seat of the hydraulic tappet, the only sure way to correct the condition is to remove the hydraulic tappet from the engine. Then clean out the dirt or replace the tappet assembly. We just haven't been able to find a short cut to correct tappets that leak down because of dirt imbedded under the seat.

## Running in New Lining

All service personnel are cautioned against the practice of making rapid or severe brake applications in an attempt to run in new brake lining. Such braking action will often result in a pronounced pull on the vehicle to one side. Or even smoking at the wheels if braking is severe or prolonged. Any abuse of a brake lining right after a reline job will superheat the ground surface of the lining. This brings the resins to the surface; causes a grabbing action.

A set of new brakes should be treated similar to a newly overhauled engine. Since the surface of the brake lining, and possibly the drum surface, have been machined and ground, the brakes will require a little seating before the braking action is normal.

Always apply brakes moderately until they are smoothed-in and cured on the surface. Remember, no brake will operate satisfactorily when it is heated above its normal operating temperature!

My 16 year old daughter made a typical comment of some customers: "Dad is sure slipping, the new brakes don't feel as good as the old ones."

# CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

*Following are prices at factory for cars with standard equipment as of April 20, 1960, State or local taxes, transportation and finance charges and optional equipment are extra.*

| BODY MAKE AND MODEL | List Price at Factory without Federal Taxes | Federal Taxes and Handling Charges | Suggested Price at Factory including Federal Taxes | Shipping Weight |
|---|---|---|---|---|
| **AMERICAN MOTOR CORP.** | | | | |
| **RAMBLER** | | | | |
| American-6 | | | | |
| DeLuxe | | | | |
| Sedan, 2d. | 1638 | 157 | 1795 | 2469 |
| Sedan, 4d. | 1683 | 161 | 1844 | 2494 |
| Sta. Wagon, 2d. | 1847 | 173 | 2020 | 2539 |
| Super-6 | | | | |
| Sedan, 2d. | 1717 | 163 | 1880 | 2486 |
| Sedan, 4d. | 1762 | 167 | 1929 | 2521 |
| Sta. Wagon, 2d. | 1926 | 179 | 2105 | 2566 |
| Custom-6 | | | | |
| Sedan, 2d. | .... | ... | .... | 2529 |
| Sedan, 4d. | .... | ... | .... | 2559 |
| Sta. Wag., 2d. | .... | ... | .... | 2609 |
| Rambler-6 | | | | |
| DeLuxe | | | | |
| Sedan, 4d. | 1918 | 180 | 2098 | 2918 |
| Sta. Wag., 4d, 2s. | 2224 | 203 | 2427 | 3065 |
| Super | | | | |
| Sedan, 4d. | 2071 | 197 | 2268 | 2940 |
| Sta. Wag., 4d, 2s. | 2345 | 217 | 2562 | 3071 |
| Sta. Wag., 4d, 3s. | 2484 | 223 | 2687 | 3144 |
| Custom | | | | |
| Sedan, 4d. | 2178 | 205 | 2383 | 2949 |
| Hard top, 4d. | 2248 | 210 | 2458 | 2981 |
| Sta. Wag., 4d, 2s. | 2452 | 225 | 2677 | 3074 |
| Sta. Wag., 4d, 3s. | 2571 | 231 | 2802 | 3155 |
| Rebel-V8 | | | | |
| Super | | | | |
| Sedan, 4d. | 2182 | 205 | 2387 | 3282 |
| Sta. Wag., 4d, 2s. | 2456 | 225 | 2681 | 3406 |
| Sta. Wag., 4d, 3s. | 2575 | 231 | 2806 | 3469 |
| Custom | | | | |
| Sedan, 4d. | 2289 | 213 | 2502 | 3292 |
| Hardtop, 4d. | 2350 | 216 | 2577 | 3319 |
| Sta. Wag., 4d, 2s. | 2563 | 233 | 2796 | 3408 |
| Sta. Wag., 4d, 3s. | 2682 | 239 | 2921 | 3480 |
| Ambas.-V8 | | | | |
| Super | | | | |
| Sedan, 4d. | 2369 | 216 | 2587 | 3414 |
| Sta. Wag., 4d, 2s. | 2643 | 238 | 2881 | 3551 |
| Sta. Wag., 4d, 3s. | 2762 | 244 | 3006 | 3581 |
| Custom | | | | |
| Sedan, 4d. | 2504 | 228 | 2732 | 3426 |
| Hardtop, 4d. | 2588 | 234 | 2822 | 3465 |
| Sta. Wag., 4d, 2s. | 2778 | 248 | 3026 | 3553 |
| Hdt. Sta. Wag. | 2862 | 254 | 3116 | 3563 |
| Sta. Wag., 4d, 3s. | 2888 | 253 | 3151 | 3592 |
| **CHRYSLER CORP.** | | | | |
| **CHRYSLER** | | | | |
| Windsor | | | | |
| Sedan, 2d. | 2909 | 230 | 3139 | 3815 |
| Hardtop, 2d. | 2988 | 236 | 3224 | 3855 |
| Hardtop, 4d. | 3048 | 240 | 3288 | 3850 |
| Convertible. | 3308 | 260 | 3568 | 3855 |
| Sta. Wagon, 2s. | 3411 | 267 | 3678 | 4235 |
| Sta. Wagon, 3s. | 3488 | 273 | 3759 | 4350 |
| Saratoga | | | | |
| Sedan, 4d. | 3584 | 280 | 3864 | 4010 |
| Hard top, 2d. | 3640 | 284 | 3924 | 4030 |
| Hardtop, 4d. | 3712 | 290 | 4002 | 4035 |
| New Yorker | | | | |
| Sedan, 4d. | 4029 | 314 | 4334 | 4145 |
| Hardtop, 4d. | 4068 | 318 | 4386 | 4175 |
| Hardtop, 4d. | 4121 | 322 | 4443 | 4175 |
| Convertible. | 4453 | 347 | 4800 | 4185 |
| Sta. Wag., 2s. | 4590 | 357 | 4947 | 4515 |
| Sta. Wag., 3s. | 4691 | 365 | 5056 | 4535 |
| 300-F | | | | |
| Hardtop, 2d. | 4952 | 384 | 5336 | .... |
| Convertible. | 5382 | 414 | 5796 | .... |
| **DE SOTO** | | | | |
| Fireflite | | | | |
| Sedan, 4d. | 2748 | 219 | 2967 | 3895 |
| Hardtop, 2d. | 2827 | 225 | 3052 | 3825 |
| Hardtop, 4d. | 2888 | 229 | 3117 | 3805 |
| Adventurer | | | | |
| Sedan, 4d. | 3270 | 259 | 3529 | 3895 |
| Hardtop, 2d. | 3348 | 265 | 3613 | 3945 |
| Hardtop, 4d. | 3408 | 269 | 3677 | 3940 |
| **DODGE DART‡** | | | | |
| Seneca-V8 | | | | |
| Sedan, 2d. | 2187 | 210 | 2397 | 3530 |
| Sedan, 4d. | 2235 | 214 | 2449 | 3600 |
| Sta. Wag., 4d, 6p | 2575 | 240 | 2815 | 3975 |
| Pioneer-V8 | | | | |
| Sedan, 2d. | 2310 | 220 | 2530 | 3540 |
| Sedan, 4d. | 2355 | 223 | 2578 | 3610 |
| Hardtop, 2d. | 2382 | 225 | 2607 | 3610 |
| Sta. Wag., 4d, 6p | 2660 | 248 | 2906 | 4000 |
| Sta. Wag., 4d, 9p | 2758 | 253 | 3011 | 4065 |
| Phoenix-V8 | | | | |
| Sedan, 4d. | 2482 | 233 | 2715 | 3610 |
| **CHRYSLER CORP. cont'd** | | | | |
| **DODGE DART, cont'd** | | | | |
| Hartop, 2d. | 2503 | 234 | 2737 | 3605 |
| Hardtop, 4d. | 2558 | 238 | 2796 | 3655 |
| Convertible. | 2736 | 252 | 2988 | 3690 |
| **DODGE** | | | | |
| Matador V-8 | | | | |
| Sedan, 4d. | 2872 | 298 | 3230 | 3725 |
| Hardtop, 2d. | 2734 | 282 | 2966 | 3705 |
| Hardtop, 4d. | 2807 | 288 | 3075 | 3820 |
| Sta. Wagon, 6p. | 2960 | 270 | 3230 | 4045 |
| Sta. Wagon, 9p. | 3067 | 287 | 3384 | 4120 |
| Polara-V8 | | | | |
| Sedan, 4d. | 2868 | 273 | 3141 | 3735 |
| Hardtop, 2d. | 2920 | 276 | 3196 | 3740 |
| Hardtop, 4d. | 2983 | 282 | 3275 | 3815 |
| Convertible. | 3128 | 291 | 3416 | 3765 |
| Sta. Wagon, 6p. | 3208 | 298 | 3506 | 4085 |
| Sta. Wagon, 9p. | 3315 | 306 | 3621 | 4220 |
| **IMPERIAL** | | | | |
| Custom | | | | |
| Southampt., 2d. | 4481 | 352 | 4833 | 4655 |
| Southampt., 4d. | 4560 | 358 | 4938 | 4670 |
| Sedan, 4d. | 4560 | 358 | 4938 | 4700 |
| Crown | | | | |
| Southampt., 2d. | 4928 | 385 | 5313 | 4720 |
| Sedan, 4d. | 5156 | 402 | 5557 | 4770 |
| Southampt., 4d. | 5156 | 402 | 5557 | 4765 |
| Convertible. | 5273 | 411 | 5684 | 4820 |
| Le Baron | | | | |
| Sedan, 4d. | 5770 | 448 | 6218 | 4880 |
| Southampt., 4d. | 5770 | 448 | 6218 | 4835 |
| Limousine. | .... | ... | .... | 5860 |
| **PLYMOUTH††** | | | | |
| Savoy-V8 | | | | |
| Sedan, 2d. | 2170 | 174 | 2344 | 3490 |
| Sedan, 4d. | 2217 | 178 | 2395 | 3500 |
| Belvedere-V8 | | | | |
| Sedan, 2d. | 2290 | 183 | 2473 | 3505 |
| Sedan, 4d. | 2337 | 187 | 2524 | 3520 |
| Hardtop, 4d. | 2357 | 188 | 2545 | 3505 |
| Fury-V8 | | | | |
| Sedan, 4d. | 2463 | 196 | 2659 | 3550 |
| Hardtop, 2d. | 2485 | 198 | 2683 | 3535 |
| Hardtop, 4d. | 2538 | 202 | 2740 | 3610 |
| Convertible. | 2717 | 218 | 2932 | 3630 |
| Suburban-V8 | | | | |
| DeLuxe, 2d, 6p. | 2468 | 198 | 2666 | 3870 |
| DeLuxe, 4d, 6p. | 2550 | 203 | 2753 | 3890 |
| Custom, 4d, 6p. | 2636 | 209 | 2845 | 3890 |
| Custom, 4d, 9p. | 2738 | 217 | 2955 | 4000 |
| Sport, 4d, 6p. | 2770 | 219 | 2989 | 3895 |
| Sport, 4d, 9p. | 2872 | 227 | 3099 | 4020 |
| **VALIANT** | | | | |
| V-100 | | | | |
| Sedan, 4d. | 1874 | 159 | 2033 | 2635 |
| Sta. Wagon, 2s. | 2164 | 181 | 2345 | 2815 |
| Sta. Wagon, 3s. | 2278 | 190 | 2468 | 2845 |
| V-200 | | | | |
| Sedan, 4d. | 1948 | 164 | 2110 | 2855 |
| Sta. Wagon, 2s. | 2238 | 187 | 2423 | 2855 |
| Sta. Wagon, 3s. | 2380 | 196 | 2576 | 2860 |
| **FORD MOTOR CO.** | | | | |
| **COMET** | | | | |
| Sedan, 2d. | .... | ... | 1986 | 2399 |
| Sedan, 4d. | .... | ... | 2063 | 2432 |
| Sta. Wag., 2d. | .... | ... | 2310 | 2548 |
| Sta. Wag., 4d. | .... | ... | 2385 | 2881 |
| **FALCON** | | | | |
| Tudor. | 1748 | 166 | 1912 | 2259 |
| Fordor. | 1803 | 171 | 1974 | 2288 |
| Sta. Wagon, 2d. | .... | ... | .... | .... |
| Sta. Wagon, 4d. | .... | ... | .... | .... |
| Ranchero. | .... | ... | .... | .... |
| **FORD†** | | | | |
| Custom 300-V8 | | | | |
| Tudor. | 2026 | ... | .... | .... |
| Fordor. | 2078 | ... | .... | .... |
| Fairlane-V8 | | | | |
| Bus. Tudor. | 2075 | 208 | 2283 | 3605 |
| Tudor Sedan. | 2156 | 214 | 2370 | 3632 |
| Fordor Sedan. | 2206 | 218 | 2424 | 3706 |
| Fairlane 500-V8 | | | | |
| Tudor Sedan. | 2228 | 219 | 2447 | 3636 |
| Fordor Sedan. | 2278 | 223 | 2501 | 3710 |
| Galaxie-V8 | | | | |
| Tudor Sedan. | 2429 | 233 | 2662 | 3653 |
| Fordor Sedan. | 2479 | 237 | 2716 | 3734 |
| Victoria. | 2545 | 243 | 2788 | 3742 |
| Starliner. | 2485 | 239 | 2723 | 3667 |
| **FORD MOTOR CO. cont'd** | | | | |
| **FORD, cont'd** | | | | |
| Sunliner. | 2717 | 256 | 2973 | 3841 |
| Sta. Wag.-V8 | | | | |
| Tudor Ranch. | 2482 | 237 | 2699 | 3931 |
| Fordor Ranch. | 2527 | 242 | 2769 | 4046 |
| Ctry. Sed., 4d, 6p | 2616 | 249 | 2865 | 4062 |
| Ctry. Sed., 4d, 9p | 2696 | 254 | 2950 | 4106 |
| Ctry. Squire, 9p. | 2816 | 264 | 3080 | 4122 |
| **THUNDERBIRD** | | | | |
| Hardtop. | 3426 | 329 | 3755 | 3799 |
| Convertible. | 3860 | 362 | 4222 | 3897 |
| **LINCOLN** | | | | |
| Lincoln | | | | |
| Hardtop, 2d. | 4007 | 446 | 8253 | 4917 |
| Sedan, 4d. | 4962 | 459 | 5441 | 5016 |
| Hardtop, 4d. | 4962 | 459 | 5441 | 5012 |
| Premiere | | | | |
| Hardtop, 2d. | 5221 | 477 | 5698 | 4965 |
| Sedan, 4d. | 5451 | 494 | 5945 | 4964 |
| Hardtop, 4d. | 5451 | 494 | 5945 | 5060 |
| Continental | | | | |
| Hard top, 2d. | 6037 | 561 | 6598 | 5044 |
| Sedan, 4d. | 6267 | 578 | 6845 | 5143 |
| Hard top, 4d. | 6267 | 578 | 6845 | 5139 |
| Convertible. | 6462 | 594 | 7056 | 5180 |
| Town Car. | 8438 | 773 | 9208 | 5272 |
| Limousine. | 9388 | 844 | 10230 | 5481 |
| **MERCURY** | | | | |
| Monterey | | | | |
| Sedan, 2d. | 2389 | 242 | 2631 | 3962 |
| Sedan, 4d. | 2482 | 248 | 2730 | 4029 |
| Hardtop, 2d. | 2530 | 251 | 2781 | 3964 |
| Hardtop, 4d. | 2586 | 257 | 2845 | 4061 |
| Convertible. | 2805 | 272 | 3077 | 4161 |
| Montclair | | | | |
| Sedan, 4d. | 2983 | 287 | 3290 | 4298 |
| Hardtop, 2d. | 3041 | 290 | 3331 | 4253 |
| Hardtop, 4d. | 3099 | 295 | 3394 | 4330 |
| Park Lane | | | | |
| Hardtop, 2d. | 3473 | 321 | 3794 | 4344 |
| Hardtop, 4d. | 3532 | 326 | 3858 | 4421 |
| Convertible. | 3681 | 337 | 4018 | 4525 |
| Sta. Wagons | | | | |
| Commuter, 4d. | 2890 | 277 | 3127 | 4303 |
| Colony Park, 4d. | 3510 | 327 | 3837 | 4568 |
| **GENERAL MOTORS CORP.** | | | | |
| **BUICK** | | | | |
| Le Sabre | | | | |
| Sedan, 2d. | 2500 | 256 | 2756 | 4139 |
| Sedan, 4d. | 2606 | 264 | 2870 | 4219 |
| Hardtop, 2d. | 2647 | 268 | 2915 | 4163 |
| Hardtop, 4d. | 2718 | 273 | 2991 | 4209 |
| Convertible. | 2862 | 283 | 3145 | 4233 |
| Est. Wagon, 2s. | 3086 | 300 | 3386 | 4568 |
| Est. Wagon, 3s. | 3186 | 307 | 3493 | 4574 |
| Invicta | | | | |
| Sedan, 4d. | 3045 | 312 | 3357 | 4324 |
| Hardtop, 2d. | 3129 | 318 | 3447 | 4256 |
| Hardtop, 4d. | 3192 | 323 | 3515 | 4365 |
| Convertible. | 3290 | 330 | 3620 | 4347 |
| Est. Wagon, 2s. | 3495 | 348 | 3843 | 4644 |
| Est. Wagon, 3s. | 3595 | 353 | 3948 | 4679 |
| Electra | | | | |
| Hardtop, 2d. | 3460 | 358 | 3818 | 4453 |
| Sedan, 4d. | 3495 | 361 | 3856 | 4544 |
| Hardtop, 4d. | 3585 | 368 | 3963 | 4554 |
| Riviera, 4d. | 3695 | 405 | 4300 | 4653 |
| **CADILLAC** | | | | |
| Series 62 | | | | |
| Coupe. | 4475 | 417 | 4892 | 4670 |
| Sedan, 4w. | 4650 | 430 | 5080 | 4775 |
| Sedan, 6w. | 4650 | 430 | 5080 | 4805 |
| Cpe. deVille, 4w. | 4810 | 442 | 5252 | 4705 |
| Convertible. | 5000 | 455 | 5455 | 4850 |
| Sed. deVille, 4w. | 5040 | 458 | 5498 | 4815 |
| Sed. deVille, 6w. | 5040 | 458 | 5498 | 4835 |
| Biarritz. | 6817 | 584 | 7401 | .... |
| Seville. | 6817 | 584 | 7401 | .... |
| 60 Special | | | | |
| Hardtop. | 5700 | 533 | 6233 | 4880 |
| Series 75 | | | | |
| Sedan. | 8750 | 783 | 9533 | 5475 |
| Limousine. | 8950 | 798 | 9748 | 5860 |
| **CHEVROLET▲** | | | | |
| Biscayne-V8 | | | | |
| Sedan, 2d. | 2150 | 213 | 2389 | 3500 |
| Sedan, 4d. | 2206 | 217 | 2423 | 3570 |
| Sta. Wag., 2d, 6p | 2437 | 236 | 2649 | 3865 |
| Sta. Wag., 4d, 6p | 2519 | 241 | 2763 | 3940 |
| **GENERAL MOTORS, cont'd** | | | | |
| **CHEVROLET, cont'd** | | | | |
| Bel Air-V8 | | | | |
| Sedan, 2d. | 2270 | 221 | 2801 | 3505 |
| Sedan, 4d. | 2320 | 225 | 2345 | 3575 |
| Hardtop, 2d. | 2368 | 228 | 2596 | 3530 |
| Hardtop, 4d. | 2428 | 233 | 2661 | 3620 |
| Sta. Wag., 4d, 6p | 2607 | 247 | 2854 | 3955 |
| Sta. Wag., 4d, 9p | 2703 | 254 | 2957 | 4000 |
| Impala | | | | |
| Sedan, 4d. | 2562 | 235 | 2697 | 3550 |
| Hardtop, 2d. | 2488 | 236 | 2704 | 3540 |
| Hardtop, 4d. | 2528 | 241 | 2769 | 3630 |
| Convertible. | 2700 | 254 | 2954 | 3635 |
| Sta. Wag., 4d, 6p | 2739 | 257 | 2998 | 3960 |
| **CORVAIR** | | | | |
| 500 Series | | | | |
| Coupe, 5p. | 1810 | 174 | 1984 | 2305 |
| Sedan, 4d. | 1860 | 178 | 2038 | 2315 |
| 700 Series | | | | |
| Coupe. | 1870 | 179 | 2049 | .... |
| Sedan, 4d. | 1920 | 183 | 2103 | .... |
| **CORVETTE** | | | | |
| Sportscar. | 3583 | 309 | 3872 | 2840 |
| **OLDSMOBILE** | | | | |
| Series 88 | | | | |
| Sedan, 2d. | 2574 | 281 | 2835 | 4046 |
| Celeb. Sedan. | 2634 | 288 | 2900 | 4106 |
| Hol. Coupe. | 2667 | 288 | 2956 | 4051 |
| Hol. Spt. Sed. | 2799 | 275 | 3034 | 4151 |
| Convertible. | 2981 | 283 | 3284 | 4101 |
| Fiesta, 2s. | 3065 | 298 | 3363 | 4447 |
| Fiesta, 3s. | 3165 | 306 | 3471 | 4471 |
| Super 88 | | | | |
| Celeb. Sedan. | 2881 | 295 | 3176 | 4122 |
| Hol. Coupe. | 3020 | 305 | 3325 | 4087 |
| Hol. Spt. Sed. | 3092 | 310 | 3402 | 4177 |
| Convertible. | 3266 | 324 | 3592 | 4142 |
| Fiesta, 2s. | 3336 | 329 | 3665 | 4487 |
| Fiesta, 3s. | 3436 | 337 | 3773 | 4501 |
| Series 98 | | | | |
| Celeb. Sedan. | 3533 | 354 | 3887 | 4365 |
| Hol. Coupe. | 3715 | 368 | 4083 | 4330 |
| Hol. Spt. Sed. | 3786 | 373 | 4159 | 4435 |
| Convertible. | 3975 | 387 | 4382 | 4360 |
| **PONTIAC** | | | | |
| Catalina | | | | |
| Spt. Sedan, 2d. | 2390 | 241 | 2631 | 3835 |
| Sedan, 4d. | 2456 | 246 | 2702 | 3935 |
| Spt. Coupe. | 2515 | 251 | 2766 | 3850 |
| Vista Sed., 4d. | 2556 | 256 | 2842 | 3900 |
| Convertible. | 2866 | 273 | 3078 | 3940 |
| Sta. Wagon, 6p. | 2825 | 274 | 3099 | 4310 |
| Sta. Wagon, 9p. | 2925 | 282 | 3207 | 4365 |
| Ventura | | | | |
| Spt. Coupe. | 2706 | 265 | 2971 | 3865 |
| Sedan, 4d. | 2777 | 276 | 3047 | 3900 |
| Star Chief | | | | |
| Sedan, 2d. | 2870 | 282 | 2932 | 3910 |
| Sedan, 4d. | 2738 | 267 | 3003 | 3995 |
| Vista Sed., 4d. | 2858 | 277 | 3136 | 4040 |
| Bonneville | | | | |
| Spt. Coupe. | 2970 | 285 | 3255 | 3985 |
| Vista Sed., 4d. | 3040 | 291 | 3331 | 4065 |
| Convertible. | 3175 | 301 | 3476 | 4030 |
| Sta. Wagon. | 3225 | 305 | 3530 | 4360 |
| **STUDE-PACKARD CORP.** | | | | |
| **STUDEBAKER** | | | | |
| Lark-6 | | | | |
| DeLuxe | | | | |
| Sedan, 2d. | 1793 | 183 | 1976 | 2508 |
| Sedan, 4d. | 1858 | 189 | 2046 | 2592 |
| Sta. Wagon, 2d. | 2156 | 211 | 2366 | 2763 |
| Sta. Wagon, 4d. | 2224 | 217 | 2441 | 2793 |
| Regal | | | | |
| Sedan, 4d. | 1992 | 204 | 2196 | 2819 |
| Hardtop, 2d. | 2085 | 211 | 2296 | 2897 |
| Sta. Wagon, 4d. | 2350 | 232 | 2581 | 2836 |
| Convertible. | 2386 | 235 | 2621 | 2961 |
| LARK V-8 | | | | |
| DeLuxe | | | | |
| Sedan, 2d. | 1911 | 200 | 2111 | 2921 |
| Sedan, 4d. | 1976 | 205 | 2181 | 2941 |
| Sta. Wagon, 2d. | 2273 | 228 | 2501 | 3112 |
| Sta. Wagon, 4d. | 2343 | 233 | 2576 | 3161 |
| Regal | | | | |
| Sedan, 4d. | 2115 | 216 | 2331 | 2966 |
| Hardtop, 2d. | 2208 | 223 | 2431 | 3033 |
| Sta. Wagon, 4d. | 2482 | 244 | 2726 | 3183 |
| Convertible. | 2510 | 246 | 2756 | 3315 |
| Hawk | | | | |
| Spt. Coupe. | 2411 | 239 | 2650 | 3207 |

† For 6 cyl. models deduct $105 from List Price and $113 from Suggested Delivered Price at Factory.
†† For 6 cyl. models deduct $111 from List Price at Factory and $119 from Suggested Delivered Price at Factory.
‡ For 6 cyl. models deduct $111 from List Price and $119 from Delivered Price at Factory.
▲ For 6 cyl. models deduct $100 from List Price and $107 from Suggested Delivered Price at Factory.

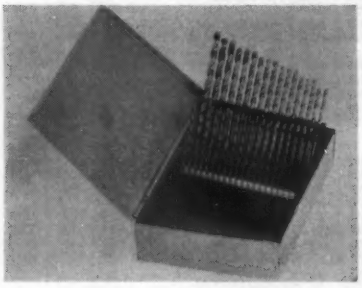


# New Products Shopping Center

### Drill Kit

*Contains one each of drill numbers 27 thru 80*

**Carter Carburetor Div., ACF Industries, Inc.:** A new drill kit designed for use by carburetor service men has been introduced. It contains one each of drill numbers 27 through 80. Because of their close graduation in sizes, the drills may also be used for gauging the various calibration points of carburetors and ignition systems. Adjustments such as fast idle carburetion settings, spark plug and ignition point gaps may be determined by use of the new drills if desired, it



was stated. *Write: Carter Carburetor Div., ACF Industries, Inc., 2840 N. Spring Ave., St. Louis 7, Mo.*

### Contoured Squeegee

*Speeds up plastic mending body work*

**Swiss Laboratory:** A double duty squeegee for use in smoothing plastic body menders is being marketed. It is claimed to do an outstanding job with all plastic menders on contour as well as



flat surfaces. It is molded with a slight contour. The squeegee does a fast job on contour surfaces, eliminates the do-over jobs. Then with a little pressure flattens out for a perfect smoothing job on flat surfaces, company claims. *Write: Swiss Laboratory, 1533 Hamilton Ave., Cleveland 14, Ohio.*

### Ignition Advance Tester

*Distributor advance tester, timing light in one compact unit*



**The Allen Electric and Equipment Co.:** Company announces the Model 27-27 Ignition Advance Tester. This portable unit combines a precision distributor advance tester and timing light in one compact unit. It checks initial engine timing at idle, measures advance electronically at any engine speed. Faulty vacuum or mechanical advance mechanisms are pinpointed. The single scale meter has a range of 0–60 degrees in one degree divisions. There is no need to pull distributor as all testing is done on car, company states. *Write: Allen Electric and Equipment Co., 2101 North Pitcher St., Kalamazoo, Mich.*

*Continued on page 88*

## Valiant's Alternator . . . . . Continued from page 42

between the alternator and regulator. Possible damage to the voltage regulator will result.

The instruments that normally would be required to make the test of the alternator circuits is a 12 volt direct current voltmeter. Also required would be an ammeter that would read at least 40 amperes direct current. In addition, a carbon pile resistor to create a load on the battery.

Connect the ammeter in series with the alternator out-put terminal. Start the engine and adjust the speed to produce 10 amperes from the alternator.

Connect the voltmeter from the DC out-put lead and connect the negative lead of the voltmeter to the battery positive post, with 10 amperes flowing from the alternator. The voltage drop reading should not exceed .2 volts.

**Current Out-Put Test**

Disconnect the field lead at the alternator and the regulator. Install ammeter in series with the alternator out-put terminal and the wire disconnected from that terminal. Connect a jumper between the DC out-put terminal and the alternator field terminal. Connect a carbon pile rheostat across the battery.

Then connect a voltmeter positive terminal to the alternator DC out-put terminal; ground the voltmeter negative lead to the alternator frame. With a tachometer installed on the engine, adjust speed to 1250 rpm. Current out-put should be 28 amperes minimum at 14.6 volts. Adjust engine speed to 2200 rpm. Out-put should not be less than 33 amperes at 50 volts.

If out-put is in excess of 40 amperes it indicates an open rectifier. If out-put is under 33 amperes it indicates a shorted rectifier.

**Voltage Regulator Setting**

Connect a DC ammeter in series with the alternator out-put terminal. Connect the voltmeter positive lead to the alternator out-put terminal; ground the negative lead on the alternator frame.

Start engine. Adjust speed to 1400 rpm., with an ammeter reading of 10 amperes. Operate engine sufficiently to stabilize the temperature. Temperature should be checked with a reliable thermometer 2 inches from the cover.

There will be a slightly higher voltage reading at higher engine speeds. This must not exceed .7 volts, at any temperature range.

**Reading the Voltmeter**

When the alternator and the regulator reach the proper stabilized temperature, then read the voltmeter. The minimum setting for 120°F. is 13.48 volts to a maximum of 14.08 volts. Adjust voltage by bending lower spring hanger up or down to increase or decrease the settings. Use an insulated bending tool. Grounding the spring hanger will burn the contact spring.

Below is listed some of the 1960 specifications for the Chrysler Valiant alternator:

**Voltage . . . 12 volts.**

**Output Amperes . . . 33–38 amperes.**

**Field Current Draw (at 70 degrees F.) . . . 2.38 min.—2.75 @ 12 volts . . . At 15 volts—2.97 min. to 3.43 max.**

**Field Fuse . . . 7.5 amperes.**

**Rotation . . . Clockwise at the drive end.**

**Brushes . . . Carbon, two for field.**

**Capacitor Capacity . . . .158 MFD, min., internally installed–.5 MFD externally installed.**

**Rectifier Resistance . . . 4–10 ohms, forward direction; infinity in reverse direction.**

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**A man doesn't fully understand the meaning of family ties until his teenage son becomes clothes-conscious.**




"What's the matter Buster, Can't you read?"

## Indianapolis . . . . . .

Continued from page 45

an additional oil collector sump on the side of the crankcase.

Veteran builder Lujie Lesovsky, Los Angeles, has a new entry ready to go. It's an improved version of his car that took the pole position last year with a blistering 145.908 mph.

Design changes include a laid-down engine, Watts linkage on the differential and front axle, a narrowing of the chasis behind the cockpit, and an upswept flare in the cowl. Keep an eye on this car—Kelso Auto Dynamics Special.

Jean Marcenac, Sherman Oaks, Calif., will nurse the famous Novis through their 15th season. This year Marcenac designed and installed aircraft-type fuel injection systems for the 8-cyl. supercharged engines. Reason for the new design is to keep a constant air/fuel ratio at any engine speed. It may be just the thing to do the trick for the Novis. The unit performed well at all speeds—even above 200 mph.—in Calif. tests.

Almost every year one or two persons try to ready a production engine to power an Indy car. They rarely even make it to the track, let alone break into the race.

This year, a firm in San Diego has high hopes for a Chevrolet

Continued on page 108

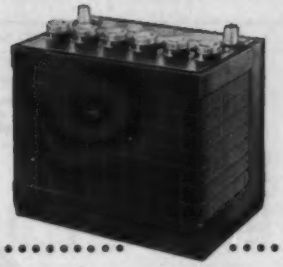
# 1960 New Passenger Car Registrations*

| STATE | | Buick | Cadillac | Chevrolet | Chrysler | De Soto | Dodge | Ford | Imperial | Lincoln | Mercury | Oldsmobile | Plymouth | Pontiac | Rambler | Studebaker | All Others | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | Feb. | 394 | 143 | 2726 | 76 | 23 | 320 | 2093 | 14 | 28 | 245 | 451 | 351 | 442 | 415 | 148 | 729 | 6598 |
| | 2 Mos. | 862 | 223 | 4118 | 121 | 42 | 502 | 3376 | 29 | 41 | 371 | 687 | 522 | 662 | 678 | 226 | 1204 | 13394 |
| Alaska | Feb. | 6 | 17 | 87 | 4 | 1 | 6 | 77 | 1 | 2 | 4 | 6 | 30 | 14 | 17 | 8 | 71 | 351 |
| | 2 Mos. | 9 | 25 | 152 | 12 | 5 | 15 | 148 | 6 | 5 | 13 | 20 | 73 | 28 | 29 | 18 | 184 | 742 |
| Arizona | Feb. | 95 | 78 | 630 | 18 | 8 | 114 | 596 | 3 | 19 | 86 | 125 | 119 | 164 | 151 | 31 | 307 | 2549 |
| | 2 Mos. | 185 | 149 | 1335 | 35 | 23 | 215 | 1516 | 13 | 48 | 181 | 301 | 304 | 294 | 478 | 90 | 660 | 5827 |
| Arkansas | Feb. | 207 | 82 | 1409 | 37 | 25 | 220 | 1348 | 8 | 18 | 145 | 314 | 257 | 329 | 233 | 88 | 356 | 5086 |
| | 2 Mos. | 381 | 147 | 2379 | 70 | 44 | 412 | 2677 | 23 | 35 | 287 | 547 | 492 | 562 | 475 | 190 | 696 | 9417 |
| California | Feb. | 1740 | 1468 | 13010 | 472 | 149 | 2467 | 13113 | 146 | 290 | 1548 | 2478 | 3208 | 2749 | 3667 | 1010 | 7337 | 54853 |
| | 2 Mos. | 3162 | 2781 | 22949 | 882 | 256 | 4135 | 24013 | 290 | 570 | 2706 | 4456 | 5533 | 4736 | 6850 | 1894 | 13627 | 93700 |
| Colorado | Feb. | 184 | 115 | 1280 | 58 | 23 | 224 | 1062 | 16 | 20 | 149 | 250 | 288 | 292 | 302 | 96 | 399 | 4758 |
| | 2 Mos. | 408 | 224 | 2511 | 106 | 38 | 452 | 2357 | 28 | 47 | 278 | 507 | 552 | 557 | 632 | 184 | 758 | 9648 |
| Connecticut | Feb. | 210 | 172 | 1438 | 110 | 36 | 328 | 1309 | 22 | 44 | 209 | 312 | 662 | 355 | 512 | 138 | 851 | 6708 |
| | 2 Mos. | 380 | 355 | 2722 | 223 | 68 | 660 | 2578 | 49 | 80 | 354 | 585 | 1210 | 690 | 1005 | 289 | 1749 | 13000 |
| Delaware | Feb. | 62 | 51 | 422 | 22 | 10 | 106 | 406 | 2 | 9 | 38 | 78 | 171 | 94 | 89 | 29 | 183 | 1772 |
| | 2 Mos. | 124 | 92 | 816 | 38 | 20 | 201 | 768 | 5 | 17 | 82 | 168 | 317 | 203 | 184 | 70 | 408 | 3531 |
| District of Columbia | Feb. | 41 | 69 | 457 | 31 | 9 | 96 | 359 | 11 | 5 | 46 | 91 | 206 | 106 | 96 | 28 | 281 | 1828 |
| | 2 Mos. | 75 | 120 | 753 | 58 | 15 | 179 | 646 | 19 | 17 | 75 | 172 | 329 | 206 | 174 | 57 | 481 | 3384 |
| Florida | Feb. | 664 | 662 | 5679 | 184 | 58 | 538 | 3911 | 69 | 136 | 390 | 864 | 1101 | 852 | 940 | 295 | 3016 | 19538 |
| | 2 Mos. | 1290 | 1275 | 11390 | 339 | 102 | 994 | 6362 | 141 | 264 | 739 | 1771 | 2084 | 1558 | 1985 | 646 | 6466 | 39399 |
| Georgia | Feb. | 283 | 138 | 1355 | 52 | 18 | 190 | 1748 | 13 | 18 | 143 | 232 | 295 | 447 | 263 | 131 | 841 | 6195 |
| | 2 Mos. | 552 | 251 | 2781 | 101 | 36 | 390 | 3515 | 26 | 39 | 285 | 592 | 581 | 941 | 537 | 217 | 1820 | 12677 |
| Hawaii | Feb. | 28 | 27 | 401 | 23 | .... | 59 | 247 | 4 | .... | 12 | 41 | 210 | 35 | 34 | 36 | 377 | 1536 |
| | 2 Mos. | 51 | 43 | 662 | 45 | 1 | 87 | 555 | 10 | 6 | 29 | 65 | 382 | 70 | 89 | 81 | 652 | 2828 |
| Idaho | Feb. | 80 | 57 | 443 | 22 | 13 | 108 | 309 | 6 | 7 | 62 | 107 | 97 | 140 | 170 | 41 | 161 | 1623 |
| | 2 Mos. | 156 | 98 | 687 | 35 | 18 | 173 | 660 | 11 | 21 | 106 | 193 | 161 | 232 | 324 | 87 | 305 | 3267 |
| Illinois | Feb. | 1760 | 892 | 9639 | 453 | 161 | 1714 | 7133 | 114 | 237 | 956 | 2262 | 2128 | 2674 | 1818 | 675 | 1548 | 34194 |
| | 2 Mos. | 3744 | 1762 | 17523 | 998 | 371 | 3405 | 14820 | 252 | 497 | 1950 | 4521 | 4308 | 5114 | 3904 | 1308 | 3463 | 67940 |
| Indiana | Feb. | 422 | 229 | 2622 | 108 | 59 | 436 | 2268 | 23 | 45 | 254 | 525 | 588 | 590 | 544 | 305 | 510 | 9528 |
| | 2 Mos. | 947 | 477 | 5475 | 254 | 136 | 965 | 4710 | 66 | 111 | 526 | 1258 | 1220 | 1276 | 1188 | 708 | 1179 | 20488 |
| Iowa | Feb. | 282 | 94 | 1493 | 63 | 36 | 353 | 1183 | 8 | 17 | 176 | 351 | 329 | 317 | 373 | 89 | 252 | 5436 |
| | 2 Mos. | 583 | 297 | 3001 | 170 | 88 | 617 | 2539 | 22 | 39 | 363 | 662 | 629 | 612 | 717 | 192 | 505 | 10906 |
| Kansas | Feb. | 319 | 135 | 1884 | 75 | 31 | 318 | 1692 | 17 | 12 | 189 | 387 | 320 | 456 | 432 | 158 | 418 | 6845 |
| | 2 Mos. | 573 | 235 | 3150 | 126 | 64 | 555 | 3204 | 35 | 42 | 327 | 682 | 599 | 755 | 775 | 291 | 847 | 12236 |
| Kentucky | Feb. | 266 | 73 | 1457 | 36 | 22 | 248 | 1383 | 12 | 15 | 140 | 317 | 290 | 352 | 292 | 96 | 252 | 5260 |
| | 2 Mos. | 532 | 165 | 2934 | 82 | 47 | 466 | 2839 | 21 | 39 | 287 | 632 | 640 | 640 | 575 | 188 | 527 | 10414 |
| Louisiana | Feb. | 304 | 141 | 2403 | 68 | 34 | 266 | 2124 | 13 | 13 | 181 | 492 | 281 | 525 | 347 | 88 | 896 | 8167 |
| | 2 Mos. | 571 | 262 | 4286 | 111 | 55 | 481 | 4135 | 31 | 38 | 343 | 884 | 516 | 999 | 613 | 198 | 1829 | 15352 |
| Maine | Feb. | 48 | 25 | 416 | 19 | 9 | 96 | 401 | 3 | 4 | 55 | 63 | 130 | 93 | 138 | 35 | 204 | 1739 |
| | 2 Mos. | 104 | 56 | 772 | 39 | 16 | 163 | 729 | 4 | 8 | 85 | 106 | 205 | 161 | 280 | 69 | 398 | 3195 |
| Maryland | Feb. | 254 | 184 | 2562 | 116 | 49 | 512 | 2019 | 20 | 21 | 158 | 358 | 321 | 406 | 486 | 122 | 770 | 8956 |
| | 2 Mos. | 550 | 327 | 4629 | 230 | 99 | 984 | 3806 | 43 | 52 | 330 | 696 | 1563 | 899 | 992 | 297 | 1728 | 17207 |
| Massachusetts | Feb. | 493 | 319 | 2630 | 192 | 88 | 771 | 2781 | 45 | 62 | 345 | 697 | 1031 | 649 | 1209 | 170 | 1478 | 12960 |
| | 2 Mos. | 862 | 521 | 4369 | 358 | 152 | 1207 | 4474 | 94 | 116 | 529 | 1245 | 1737 | 1082 | 1936 | 313 | 2521 | 21456 |
| Michigan | Feb. | 1579 | 926 | 8526 | 379 | 174 | 2161 | 9442 | 87 | 179 | 1335 | 1864 | 2541 | 2475 | 1595 | 355 | 1406 | 35024 |
| | 2 Mos. | 3291 | 2088 | 16825 | 702 | 346 | 3709 | 18387 | 163 | 353 | 2728 | 3833 | 4572 | 4899 | 3144 | 631 | 2804 | 68275 |
| Minnesota | Feb. | 571 | 300 | 2780 | 143 | 72 | 635 | 2620 | 32 | 43 | 389 | 809 | 819 | 730 | 804 | 237 | 581 | 11565 |
| | 2 Mos. | 837 | 461 | 3977 | 220 | 102 | 877 | 4096 | 47 | 59 | 550 | 1155 | 1094 | 1058 | 1163 | 353 | 848 | 16897 |
| Mississippi | Feb. | 261 | 70 | 1221 | 44 | 15 | 135 | 1099 | 6 | 14 | 81 | 281 | 273 | 307 | 179 | 91 | 376 | 4453 |
| | 2 Mos. | 355 | 103 | 1713 | 60 | 19 | 190 | 1572 | 10 | 17 | 112 | 404 | 342 | 412 | 245 | 118 | 545 | 6217 |
| Missouri | Feb. | 410 | 206 | 2953 | 103 | 34 | 491 | 2483 | 28 | 31 | 216 | 567 | 653 | 602 | 589 | 123 | 635 | 10124 |
| | 2 Mos. | 796 | 413 | 5045 | 168 | 64 | 875 | 4582 | 56 | 70 | 375 | 995 | 1126 | 1041 | 1025 | 264 | 1295 | 18172 |
| Montana | Feb. | 88 | 45 | 402 | 16 | 9 | 77 | 344 | 8 | 7 | 66 | 83 | 75 | 83 | 111 | 42 | 99 | 1553 |
| | 2 Mos. | 175 | 72 | 680 | 32 | 16 | 152 | 721 | 13 | 15 | 131 | 166 | 152 | 160 | 219 | 73 | 179 | 2956 |
| Nebraska | Feb. | 142 | 68 | 918 | 32 | 9 | 109 | 744 | 6 | 8 | 83 | 184 | 177 | 205 | 209 | 50 | 136 | 3180 |
| | 2 Mos. | 330 | 166 | 2184 | 82 | 29 | 400 | 1929 | 19 | 24 | 236 | 419 | 406 | 420 | 462 | 121 | 329 | 7548 |
| Nevada | Feb. | 34 | 31 | 191 | 11 | 3 | 33 | 185 | 8 | 20 | 48 | 55 | 50 | 69 | 67 | 49 | 130 | 984 |
| | 2 Mos. | 46 | 54 | 272 | 17 | 4 | 55 | 320 | 12 | 28 | 82 | 75 | 80 | 96 | 103 | 70 | 238 | 1552 |
| New Hampshire | Feb. | 41 | 21 | 270 | 12 | 8 | 74 | 274 | 3 | 7 | 28 | 58 | 72 | 57 | 110 | 33 | 133 | 1199 |
| | 2 Mos. | 64 | 38 | 545 | 26 | 12 | 140 | 568 | 9 | 12 | 73 | 108 | 151 | 117 | 223 | 64 | 335 | 2485 |
| New Jersey | Feb. | 828 | 672 | 4956 | 524 | 264 | 1214 | 4269 | 122 | 125 | 567 | 1149 | 1857 | 1256 | 1280 | 398 | 1705 | 21124 |
| | 2 Mos. | 1581 | 1363 | 9194 | 923 | 338 | 2384 | 8020 | 224 | 241 | 1049 | 2210 | 3389 | 2353 | 2520 | 710 | 3681 | 40160 |
| New Mexico | Feb. | 48 | 39 | 347 | 20 | 4 | 50 | 317 | 4 | 2 | 51 | 80 | 59 | 72 | 65 | 28 | 101 | 1287 |
| | 2 Mos. | 113 | 74 | 762 | 42 | 11 | 106 | 755 | 13 | 6 | 91 | 182 | 133 | 161 | 190 | 73 | 271 | 3003 |
| New York | Feb. | 1788 | 1692 | 9474 | 988 | 248 | 3136 | 8407 | 179 | 256 | 1190 | 2699 | 3999 | 2809 | 2571 | 1253 | 5416 | 46104 |
| | 2 Mos. | 3182 | 2578 | 18693 | 1552 | 395 | 4675 | 14961 | 314 | 467 | 1949 | 4627 | 6012 | 4661 | 4517 | 1625 | 8097 | 74425 |
| North Carolina | Feb. | 363 | 144 | 2058 | 67 | 29 | 302 | 2297 | 16 | 18 | 154 | 337 | 455 | 436 | 331 | 123 | 675 | 7825 |
| | 2 Mos. | 658 | 327 | 4549 | 191 | 74 | 726 | 5020 | 35 | 41 | 380 | 813 | 1055 | 984 | 787 | 318 | 1778 | 17941 |
| North Dakota | Feb. | 61 | 34 | 339 | 29 | 14 | 112 | 366 | 4 | 1 | 45 | 107 | 122 | 75 | 73 | 21 | 42 | 1445 |
| | 2 Mos. | 128 | 62 | 754 | 59 | 29 | 202 | 857 | 7 | 11 | 130 | 211 | 251 | 151 | 175 | 49 | 95 | 3171 |
| Ohio | Feb. | 1448 | 711 | 7541 | 339 | 187 | 1966 | 7533 | 64 | 104 | 1023 | 1766 | 2375 | 2088 | 1549 | 487 | 1722 | 30943 |
| | 2 Mos. | 2892 | 1419 | 14503 | 704 | 436 | 3648 | 14067 | 152 | 229 | 1959 | 3453 | 4494 | 3847 | 3200 | 1003 | 3807 | 59835 |
| Oklahoma | Feb. | 205 | 129 | 1435 | 44 | 18 | 178 | 1325 | 5 | 17 | 115 | 303 | 283 | 316 | 254 | 76 | 286 | 4949 |
| | 2 Mos. | 377 | 219 | 2486 | 73 | 36 | 301 | 2337 | 15 | 32 | 202 | 544 | 485 | 532 | 454 | 139 | 516 | 8720 |
| Oregon | Feb. | 128 | 88 | 992 | 25 | 10 | 109 | 840 | 12 | 13 | 85 | 153 | 160 | 176 | 290 | 76 | 366 | 3193 |
| | 2 Mos. | 184 | 89 | 1217 | 44 | 17 | 174 | 1161 | 16 | 50 | 135 | 231 | 243 | 288 | 472 | 141 | 585 | 5045 |
| Pennsylvania | Feb. | 1190 | 804 | 6805 | 556 | 284 | 2401 | 5496 | 100 | 112 | 798 | 1425 | 2642 | 1609 | 2099 | 676 | 1983 | 28980 |
| | 2 Mos. | 2292 | 1426 | 12356 | 1050 | 508 | 4243 | 16358 | 206 | 231 | 1488 | 2675 | 4825 | 2983 | 4028 | 1290 | 4401 | 54346 |
| Rhode Island | Feb. | 71 | 48 | 434 | 36 | 5 | 126 | 548 | 13 | 5 | 45 | 92 | 239 | 82 | 193 | 30 | 264 | 2231 |
| | 2 Mos. | 135 | 113 | 802 | 64 | 22 | 236 | 1049 | 22 | 16 | 90 | 189 | 360 | 165 | 360 | 70 | 540 | 4253 |
| South Carolina | Feb. | 183 | 67 | 1275 | 39 | 14 | 212 | 1269 | 6 | 6 | 84 | 192 | 288 | 299 | 214 | 49 | 484 | 4691 |
| | 2 Mos. | 432 | 147 | 2529 | 87 | 40 | 432 | 2691 | 11 | 22 | 204 | 433 | 588 | 625 | 481 | 119 | 1158 | 9919 |
| South Dakota | Feb. | 65 | 16 | 453 | 19 | 12 | 97 | 486 | 2 | 7 | 65 | 102 | 114 | 168 | 124 | 20 | 70 | 1760 |
| | 2 Mos. | 178 | 56 | 998 | 49 | 20 | 201 | 1068 | 11 | 19 | 161 | 235 | 227 | 243 | 279 | 72 | 177 | 3994 |
| Tennessee | Feb. | 321 | 128 | 1901 | 53 | 29 | 311 | 1858 | 15 | 29 | 165 | 423 | 396 | 425 | 324 | 108 | 542 | 7022 |
| | 2 Mos. | 645 | 264 | 3837 | 99 | 53 | 603 | 3705 | 28 | 57 | 324 | 837 | 774 | 841 | 705 | 248 | 1071 | 14119 |
| Texas | Feb. | 965 | 484 | 6834 | 176 | 73 | 821 | 6077 | 60 | 73 | 379 | 1346 | 1032 | 1360 | 907 | 339 | 2060 | 23071 |
| | 2 Mos. | 1973 | 982 | 12389 | 346 | 125 | 1809 | 11896 | 126 | 161 | 790 | 2641 | 2985 | 2645 | 1820 | 663 | 3988 | 43989 |
| Utah | Feb. | 88 | 45 | 392 | 23 | 18 | 118 | 450 | 9 | 12 | 81 | 100 | 150 | 132 | 167 | 34 | 161 | 1978 |
| | 2 Mos. | 153 | 79 | 714 | 34 | 32 | 169 | 779 | 17 | 20 | 140 | 195 | 220 | 237 | 287 | 61 | 258 | 3445 |
| Vermont | Feb. | 12 | 5 | 89 | 7 | 1 | 12 | 70 | .... | .... | 5 | 6 | 53 | 14 | 34 | 7 | 40 | 335 |
| | 2 Mos. | 42 | 11 | 256 | 18 | 4 | 48 | 252 | 4 | 2 | 28 | 27 | 70 | 47 | 83 | 28 | 125 | 1055 |
| Virginia | Feb. | 402 | 193 | 2502 | 126 | 60 | 486 | 2372 | 20 | 40 | 258 | 456 | 883 | 532 | 443 | 182 | 1232 | 10159 |
| | 2 Mos. | 791 | 366 | 4714 | 231 | 117 | 943 | 4674 | 44 | 79 | 527 | 875 | 1526 | 1017 | 872 | 382 | 2505 | 19663 |
| Washington | Feb. | 165 | 75 | 946 | 32 | 22 | 172 | 955 | 7 | 14 | 101 | 173 | 235 | 233 | 301 | 89 | 546 | 4066 |
| | 2 Mos. | 379 | 171 | 2131 | 85 | 49 | 392 | 2397 | 20 | 42 | 255 | 456 | 594 | 573 | 625 | 209 | 1591 | 10171 |
| West Virginia | Feb. | 162 | 47 | 805 | 43 | 18 | 185 | 679 | 8 | 11 | 108 | 178 | 321 | 171 | 177 | 57 | 167 | 3157 |
| | 2 Mos. | 332 | 117 | 1616 | 96 | 45 | 363 | 1428 | 18 | 22 | 196 | 380 | 523 | 330 | 367 | 123 | 426 | 6382 |
| Wisconsin | Feb. | 624 | 310 | 2872 | 154 | 70 | 702 | 2582 | 23 | 40 | 355 | 815 | 588 | 775 | 1462 | 161 | 553 | 12092 |
| | 2 Mos. | 1066 | 470 | 4716 | 257 | 110 | 1074 | 4159 | 45 | 79 | 589 | 1312 | 925 | 1270 | 2368 | 277 | 971 | 19888 |
| Wyoming | Feb. | 39 | 32 | 221 | 8 | 3 | 34 | 150 | 1 | 3 | 21 | 67 | 82 | 40 | 71 | 16 | 106 | 894 |
| | 2 Mos. | 85 | 62 | 477 | 22 | 13 | 70 | 375 | 6 | 7 | 45 | 143 | 140 | 111 | 180 | 32 | 242 | 1960 |
| Total | February, 1960 | 20402 | 12589 | 124745 | 6327 | 2515 | 26051 | 112899 | 1423 | 2219 | 13493 | 26721 | 33767 | 29619 | 29123 | 9032 | 43283 | 494178 |
| Total | February, 1959 | 20859 | 11941 | 106748 | 3619 | 2851 | 7676 | 103749 | 1228 | 2504 | 11106 | 27775 | 20707 | 27366 | 21894 | 9828 | 45044 | 425095 |
| Total | 2 Months, 1960 | 39423 | 23547 | 227401 | 11803 | 4746 | 46137 | 215553 | 2879 | 4555 | 25314 | 50502 | 60713 | 54282 | 55764 | 16962 | 84773 | 924294 |
| Total | 2 Months, 1959 | 42518 | 23902 | 213570 | 8218 | 6134 | 17865 | 200433 | 2763 | 5034 | 22251 | 56824 | 47331 | 52975 | 42968 | 19248 | 85123 | 845846 |

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**THE PROBLEM:**

How do you check a dry-charged battery before the electrolyte is added to complete an electrical circuit? Here's the Autolite answer that assures top quality control . . .



**THE SOLUTION:**

# Electronic "BRAIN" tests dry-charged Autolite batteries right on the production line

**ONLY FULL-POWER BATTERIES GET TO DEALERS' SHELVES!**




## Exclusive Autolite factory device performs seemingly impossible test

Testing batteries after manufacture used to be a simple operation. Any electrical tester could be attached to the battery terminals and the battery's condition was known at once. But with dry-charged batteries, there is no electrolyte present to complete the circuit and no such *electrical* test is possible! Reversed cells and shorted cells were very difficult to eliminate.

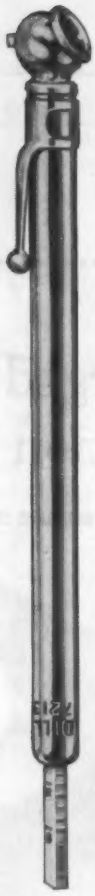
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- Tests have shown this to be a fast-moving item . . . order yours today from your supplier.

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RETAILS FOR..... $14.10
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# 1960 Tune Up—Alignment Specifications

| MAKE AND MODEL | ENGINE | | TUNE-UP DATA | | | | | | | | | FRONT END ALIGNMENT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | VALVES | | | | IGNITION | | | | | | | |
| | | | | Seat Angle | | Clearance Tappet Operating | | | | | Timing | | | | |
| | No. of Cylinders Bore and (in.) | Maximum Brake H.P. | Spark Plug Make and Size (mm.) | Inlet (Deg.) | Exhaust (Deg.) | Inlet (In.) | Exhaust (In.) | Breaker Point Gap (In.) | Cam Angle (Deg.) | Spark Plug Gap (In.) | Spark Occurs T.C. | Steering Axis Inclination (Deg.) | Caster (Deg.) | Camber (Deg.) | Toe-in (In.) |
| **AMERICAN MOTORS CORP.** | | | | | | | | | | | | | | | |
| Rambler...American 6-6001 Deluxe, Super | 6-3½x4½ | 90 | CA-14 | 45 | 45 | .018C | .018C | .020 | 39 | .035 | 3B | 8 | 0 to ½P | ¼N to ¼P | 1/32 to 1/32 |
| ...American 6-6001 Custom | 6-3½x4½ | 125 | CA-14 | 45 | 45 | .012H | .018H | .016 | 32 | .035 | 6B | 8 | 0 to ½P | ¼N to ¼P | 1/32 to 1/32 |
| ...6 x 6-6010 | 6-3½x4½ | 127 | CA-14 | 45 | 45 | .012H | .018H | .016 | 32 | .035 | 5B | 6°11′ | 0 to ½P | ¼N to ¼P | 1/32 to 1/32 |
| ...Rebel 6-6020 | 6-3½x3¾ | 200 | CA-14 | 30 | 45 | .012H | .014H | .017 | 30 | .035 | TC | 6°11′ | 0 to ½P | ¼N to ¼P | 1/32 to 1/32 |
| ...Ambassador 6-6080 | 6-4x3½ | 250 | CA-14 | 30 | 45 | Hyd | Hyd | .017 | 30 | .035 | TC | 6°11′ | 0 to ½P | ¼N to ¼P | 1/32 to 1/32 |
| **CHECKER MOTORS CORP.** | | | | | | | | | | | | | | | |
| Superba...A-10L | 6-3⅛x4½ | 90 | Ch-18 | 30 | 44 | .014H | .014H | .020 | 39 | .029 | 4B | 7 | 2P | 1/32P to 1½P | 1/32 to 1/16 |
| ...A-10 | 6-3⅛x4½ | 122 | Ch-14 | 30 | 44 | .017H | .023H | .020 | 39 | .033 | 3½B | 7 | 2P | 1/32P to 1½P | 1/32 to 1/16 |
| **CHRYSLER CORP.** | | | | | | | | | | | | | | | |
| Chrysler...Windsor 8-PC1-L | 8-4⅛x3¾ | 305 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 16B | 8½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Saratoga 8-PC2-M | 8-4⅛x3¾ | 325 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 8½ | ¼P to 1¼P | 1/32P to 1/16P | 1/32 to 1/32 |
| ...New Yorker 8-PC3-H | 8-4⅛x3¾ | 350 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 8½ | ¼P to 1¼P | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-300F | 8-4⅛x3¾ | 375 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 5B | 8½ | ¼P to 1¼P | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-300F (Engine Option) | 8-4⅛x3¾ | 400 | ACH-14 | 45 | 45 | .016C | .022C | .017 | 30 | .035 | 10B | 8½ | ¼P to ¼P | 1/32P to 1/16P | 1/32 to 1/32 |
| De Soto...Firefiite 8-PS1-L | 8-4⅛x3⅜ | 295 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Adventurer 8-PS3-M | 8-4⅛x3⅜ | 305 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PS1-L, PS3-M (Engine Option) | 8-4⅛x3⅜ | 325 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 12½B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PS3-M (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 7½B | 12½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| Dodge...Matador 8-PD1-L | 8-4⅛x3⅜ | 295 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Polara 8-PD2-H | 8-4⅛x3⅜ | 325 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PD1-L, PD2-H (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 7½B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| Dodge Dart...Seneca 6-PD3-L | | | | | | | | | | | | | | | |
| ...Pioneer 6-PD3-M, Phoenix PD3-H | 6-3⅛x4½ | 145 | AL-14 | 45 | 46 | .010H | .020H | .020 | 39 | .035 | 2½B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Seneca 6-PD4-L, Pioneer 8-PD4-M, Phoenix 8-PD4-H | 8-3⅜ x3⅛ | 230 | AL-14 | 45 | 45 | .010H | .018H | .017 | 30 | .035 | 5B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Phoenix 8-PD4-H (Early Models) | 8-3⅜ x3⅛ | 255 | AL-14 | 45 | 45 | .010H | .018H | .017 | 30 | .035 | 10B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PD4-H (Engine Option) | 8-4⅛x3⅜ | 310 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 7½B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PD4-H (Engine Option) | 8-4⅛x3⅜ | 325 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 12½B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PD4-H (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 7½B | 6½ | ¼N to 1½N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PD4-H (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 12½B | 6½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| Imperial...Custom, Crown, Lebaron 8-PY1 | 8-4⅛x3⅜ | 350 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | ¼P to 1¼P | 1/32P to 1/16P | 1/32 to 1/32 |
| Plymouth...Savoy, Belvedere, Fury 6-PP1 | 6-3⅛x4½ | 145 | AL-14 | 45 | 47 | .010H | .020H | .020 | 39 | .035 | 2½B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...Savoy, Belvedere, Fury 8-PP2 | 8-3⅜ x3⅛ | 230 | AL-14 | 45 | 45 | .010H | .018H | .017 | 30 | .035 | 5B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-3⅜ x3⅛ | 260 | AL-14 | 45 | 45 | .010H | .018H | .017 | 30 | .035 | 10B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-4⅛x3⅜ | 305 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 10B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-4⅛x3⅜ | 310 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 5B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-4⅛x3⅜ | 325 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 12½B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 12½B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...8-PP2 (Engine Option) | 8-4⅛x3⅜ | 330 | AL-14 | 45 | 45 | Hyd | Hyd | .017 | 30 | .035 | 7½B | 6½ | 0 to 1N | 1/32P to 1/16P | 1/32 to 1/32 |
| Valiant...8-V100 QX1-L, V-200 QX1-H | 6-3⅛x3½ | 101 | AL-14 | 45 | 47 | .010H | .020H | .020 | 39 | .035 | 5B | 7½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| ...6-V100, V200 (Engine Option) | 6-3⅛x3½ | 148 | AL-14 | 47 | 47 | .010H | .020H | .020 | 39 | .016 | 11B | 7½ | ¼N to 1¼N | 1/32P to 1/16P | 1/32 to 1/32 |
| **FORD MOTOR CO.** | | | | | | | | | | | | | | | |
| Comet...6 | 6-3½x2½ | 90 | Ch-18 | 45½ | 45½ | .018H | .018H | .025 | 37 | .034 | 2B | 7 | 1P to 2P | 1/16P to 1¼P | 1/32 to 1/16 |
| Edsel...Ranger-6 | 6-3⅝x3⅜ | 145 | Ch-18 | 45½ | 45½ | .019H | .019H | .025 | 37 | .034 | 4B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...Ranger-8 | 8-3⅜x3⅛ | 185 | Ch-18 | 45½ | 45½ | .019H | .019H | .015 | 27 | .034 | 3B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...8-(Engine Option) | 8-4x3½ | 300 | Ch-18 | 60½ | 45½ | Hyd | Hyd | .015 | 27 | .034 | 3B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| Falcon...6 | 6-3½x2½ | 90 | Ch-18 | 45½ | 45½ | .018H | .018H | .025 | 37 | .034 | 2B | 7 | 1½P | 1/32P to 1¼P | 1/32 to 1/16 |
| Ford...Fairlane, Fairlane 500, Galaxie-6 | 6-3⅝x3⅛ | 145 | Ch-18 | 45½ | 45½ | .019H | .019H | .025 | 37 | .034 | 4B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...Fairlane, Fairlane 500, Galaxie-8 | 8-3⅜x3⅛ | 185 | Ch-18 | 45½ | 45½ | .019H | .019H | .015 | 27 | .034 | 3B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...All Models (Engine Option) | 8-4x3½ | 235 | Ch-18 | 60½ | 45½ | Hyd | Hyd | .015 | 27 | .034 | 3B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...All Models (Engine Option) | 8-4x3½ | 300 | Ch-18 | 60½ | 45½ | Hyd | Hyd | .015 | 27 | .034 | 3B | 6¾ | ½N to ½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...Thunderbird-8 | 8-4x3½ | 300 | Ch-18 | 60½ | 45½ | Hyd | Hyd | .015 | 27 | .034 | 4B | 6¾ | ½P to 1½P | 1/32P to 1½P | 1/32 to 1/32 |
| ...(Engine Option) | 8-4⅛x3⅜ | 380 | Ch-18 | 45½ | 45½ | Hyd | Hyd | .015 | 27 | .034 | 4B | 6¾ | ½P to 1½P | 1/32P to 1½P | 1/32 to 1/32 |
| Lincoln...Lincoln, Premiere, Continental-8 | 8-4⅛x3⅜ | 315 | Ch-18 | 45 | 45 | Hyd | Hyd | .015 | 27 | .034 | 6B | 7°29′ | 0 to 1½N | 0 to ¾P | 1/32 to 1/32 |
| Mercury...Monterey-6 | 6-3⅝x3⅞ | 205 | Ch-18 | 45 | 45 | .018H | .018H | .015 | 27 | .034 | 3B | 7 | 0 to 1½N | 0 to ¾P | 1/32 to 1/32 |
| ...Monterey-8 (Engine Option) | 8-4⅛x3⅜ | 280 | Ch-18 | 45 | 45 | ..... | ..... | .015 | 27 | .034 | 6B | 7 | 0 to 1½N | 0 to ¾P | 1/32 to 1/32 |
| ...Montclair, Park Lane-8 | 8-4⅛x3⅜ | 310 | Ch-18 | 45 | 45 | Hyd | Hyd | .015 | 27 | .034 | 6B | 7 | 0 to 1½N | 0 to ¾P | 1/32 to 1/32 |
| **GENERAL MOTORS CORP.** | | | | | | | | | | | | | | | |
| Buick...Le Sabre 8-4400 | 8-4⅛x3⅜ | 250 | AC-14 | 45 | 45 | Hyd | Hyd | .015 | 30 | .033 | 5B | 7 | 2N | 1/16P | 1/32 to 1/32 |
| ...Invicta 8-4800; Electra 8-4700, 4800 | 8-4⅛x3⅜ | 325 | AC-14 | 45 | 45 | Hyd | Hyd | .015 | 30 | .033 | 12B | 7 | 2N | 1/16P | 1/32 to 1/32 |
| Cadillac...8-62, 60, 75 | 8-4x3⅞ | 325 | AC-14 | 44 | 44 | Hyd | Hyd | .016 | 30 | .035 | 5B | 4 | ¼N to 1¼N | 1/32N to 1/16P | 1/32 to 1/32 |
| ...Eldorado 8-62 | 8-4x3⅞ | 345 | AC-14 | 44 | 44 | Hyd | Hyd | .016 | 30 | .038 | 5B | 4 | ¼N to 1¼N | 1/32N to 1/16P | 1/32 to 1/32 |
| Chevrolet...6-1100, 1300, 1500, 1700 | 6-3⅞x3⅜ | 135 | AC-14 | 31 | 46 | Hyd | Hyd | .019 | 32 | .038 | 5B | 7°11′ | ¼N to ¼P | 0 to 1P | 1/32 to 1/16 |
| ...8-1200, 1400, 1600, 1800 | 8-3⅞x3 | 170 | AC-14 | 46 | 46 | Hyd | Hyd | .019 | 30 | .038 | 4B | 7°11′ | ¼N to ¼P | 0 to 1P | 1/32 to 1/16 |
| ..8-1200, 400, 1600, 1800 (Eng no Opt on) | 8-4⅛x3⅜ | 250 | AC-14 | 46 | 46 | Hyd | Hyd | .019 | 30 | .038 | 5B | 7°11′ | ¼N to ¼P | 0 to 1P | 1/32 to 1/16 |
| ...Corvette 8-867 | 8-3⅞x3 | 230 | AC-14 | 46 | 46 | Hyd | Hyd | .019 | 30 | .038 | 4B | 4 | 1½P to 2½P | ¼N to ½P | 0 to 1/16 |
| Corvair...6-500, 700 | 6-3⅜x2⅜ | 80 | AC-14 | 45 | 45 | Hyd | Hyd | .019 | 33 | .035 | 4B | 7 | 4P to 4½P | 0 to 1P | 1/32 to 1/32 |
| ...6-500, 700 (Engine Option) | 6-3⅜x2⅜ | 95 | AC-14 | 45 | 45 | Hyd | Hyd | .019 | 33 | .035 | 16B | 7 | 4P to 4½P | 0 to 1P | 1/32 to 1/32 |
| Oldsmobile...Dynamic 8-88 | 8-4x3⅛ | 240 | AC-14 | 45 | 45 | Hyd | Hyd | .016 | 30 | .030 | 5B | 10 | 0 to 1N | ¼N to ¼P | 0 to 1/16 |
| ...Super 88, Ninety-Eight-8 | 8-4⅛x3⅛ | 315 | AC-14 | 45 | 45 | Hyd | Hyd | .016 | 30 | .030 | 5B | 10 | 0 to 1N | ¼N to ¼P | 0 to 1/16 |
| Pontiac...Catalina 60-21, Ventura 60-23, ...Star Chief 60-24-8 | 8-4⅛x3¾ | 215 | AC-14 | 30 | 45 | Hyd | Hyd | .016 | 30 | .038 | 4B | 4°50′ | 1N to 2N | ¼N to ¼P | 0 to 1/16 |
| ...Bonneville 8-60-27, 60-28 | 8-4⅛x3¾ | 281 | AC-14 | 30 | 45 | Hyd | Hyd | .016 | 30 | .038 | 5B | 4°50′ | 1N to 2N | ¼N to ¼P | 0 to 1/16 |
| **STUDEBAKER-PACKARD CORP.** | | | | | | | | | | | | | | | |
| Studebaker...Lark VI 6-685 | 6-3x4 | 90 | Ch-14 | 45 | 45 | .018C | .018C | .020 | 39 | .031 | 2B | 6 | 1N to 2½N | 0 to 1P | 1/32 to 1/16 |
| ...Lark VIII 8-60V | 8-3⅞x3¼ | 180 | Ch-14 | 45 | 45 | .024H | .024H | .016 | 30 | .038 | 4B | 6 | 1N to 2½N | 0 to 1P | 1/32 to 1/16 |
| ...Hawk 8-60V | 8-3⅞x3⅝ | 210 | Ch-14 | 45 | 45 | .024H | .024H | .016 | 31 | .038 | 4B | 6 | 1N to 2½N | 0 to 1P | 1/32 to 1/16 |

**ABBREVIATIONS**

'—Left only; right, ½N to ¾P

AC—A.C. Spark Plug Div.
ACH—Autolite or Champion
AL—Electric Autolite Co.
B—Before top center.
C—Cold.
CA—Champion or Autelite.
Ch—Champion Spark Plug Co.
H—Hot.
Hyd—Hydraulic valve lifters.
N—Negative.
P—Positive.
TC—Top center.

# HANSON Testers Give

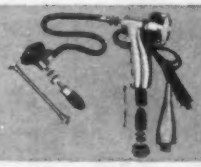
## Compare Hanson's

**Model 18 *for* $52.50**

**Mechanic's Price**
**less battery**

*WITH COMPETITIVE AUTOMOTIVE TESTING EQUIPMENT*

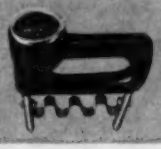


**Compression Tester with Remote Starter Switch**
**$16.95**



**Deluxe Vacuum-Fuel Pump Tester**
**$8.30**



**Battery Cell Tester**
**$6.35**

# Don't Pay More for Your



**Compression Tester**
**$5.45**



**Standard Vacuum-Fuel Pump Tester**
**$5.45**



**Motor Analyzing Set**
**$32.89**
**Other Sets from $23.24**



**Starter Current Indicator** **$4.65**

# Buy More Top Quality

*See Your Jobber...Write for Informative Literature*

## HARVEY E. HANSON CO.

# You More for Your Money



## COMPLETE MOTOR TESTER

| | |
|---|---|
| **DWELL-TACH TESTER** Mechanic's Price less battery..... | $52.50 |
| **EXHAUST GAS TESTER** Mechanic's Price less battery..... | 46.95 |
| **IGNITION-COIL-CONDENSER TESTER.** Mechanic's Price ..... | 57.50 |
| **AMP-VOLT-OHM TESTER** Mechanic's Price less battery..... | 41.95 |

Complete Motor Analyser on mobile stand. All four units easily removed for portable testing. Never before so much value at this low price..... **$252.95**



Power Timing Light $21.95



Deluxe Power Timing Light $29.95

# EQUIPMENT...



Generator Current Indicator $4.65



Deluxe Timing Light $5.45



Remote Starter Switch $3.20



5 UNITS INCLUDING Metal Case $145.00

# Hanson Testers

*on Basic Auto Testing Equipment!*

145 WEST COMMERCIAL STREET
PAW PAW, MICHIGAN

*FREE! FREE! FREE!*

HARVEY E. HANSON CO.
145 W. COMMERCIAL STREET
PAW PAW, MICHIGAN DEPT. MAG

Send me free literature covering basic auto testing equipment.

Name_____

Address_____

City_____ State_____

## Austin Engine . . . . . •Continued from page 55

produced on the main continent of Europe all use metric size nuts and bolts, thus they require the use of special metric wrenches.

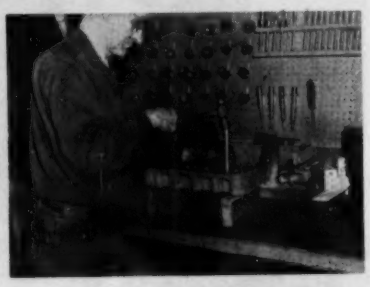
Your local tool supplier or your jobber has on hand supplies of these special tools at a nominal cost. If you are in, or thinking of getting into the imported car repair field, these wrenches are a must.

The Austin engine can be removed from the frame without disturbing the gear box. It can also be removed along with the gear box by removing floor boards and center cross member. This same engine is also used in the British Morris Minor, produced by the BMC corporation. The only difference is the type of carburetor and fuel pump used. Being of conventional overhead valve design the disassembly procedure would follow that of any conventional unit.

Drain the cooling system. Drain the oil. Remove cylinder head & oil pan. Separate gear box from engine, if removed as a unit. Remove clutch, flywheel and rear mounting plate. Remove oil pump, behind the rear mounting plate. Oil pump is driven from the rear end of camshaft (notice the large counter bore visible in illustration of boring bar set-up). Remove crankshaft pulley, water pump and timing chain cover. Washers behind cranking dog nut are used to give the correct cranking handle angle for manual cranking.

Wire the washers to the dog nut so they can't be lost. Remove the bolt holding camshaft sprocket at the same time. Washers behind the crankshaft sprocket are used to align the sprocket parallel with the camshaft sprocket to ease side thrust on timing chain.

Mark main bearing caps on side near camshaft. Bearing caps will have factory numbers that also appear on each crankcase web. Mark connecting rod caps on camshaft side. Use a file or paint as center punch marks may distort the cap and cause future bearing troubles. Remove main bearing and connecting rod caps. Remove crankshaft. Remove the four pistons and rod assemblies. Install connecting rod caps on to the correct rod assembly.



It is essential on overhead valve engines that the valve guides be renewed if worn excessively.

### Cleaning and Inspection

Strip all fittings from cylinder block. Remove all welch plugs. Submerge cylinder block in a chemical cleaning solution. This will clean all the sludge and scale from the water jackets, passages and crankcase. Cleaning the block in this way assures you of efficient cooling water and oil circulation

*Continued on page 86*





Why send radiator jobs away? Add an extra $8,000, $10,000, $12,000 or $15,000-a-year with Inland's factory-method radiator servicing.

**JUST CONSIDER:** (1) There is an ever-growing number of autos, trucks and tractors in your area, (2) Modern cooling-system pressures have been increased to the point where radiators require far more frequent servicing.

**INVESTIGATE—Have us mail you full details:**

- **Photos and statements from Inland-equipped shop owners,**
- **Inland's "Pays-For-Itself" payment plan,**
- **Inland's free factory school which trains you or your man quickly,**
- **Inland's proved merchandising and selling helps.**

**MAIL TODAY**

New free 48-page book, "Blueprint for Profits," tells about many making an EXTRA $8,000 to $15,000 a year servicing radiators. Complete with illustrations, descriptions and prices of required equipment. Popular "Pays-For-Itself" purchase plan. Invest a minute to mail the coupon — the rewards can be amazing! Send today!

**INLAND MFG. CO., 1108 Jackson St.**
**Dept. MA-5, Omaha 2, Nebr.**
**"SOLD EXCLUSIVELY BY MAIL"**

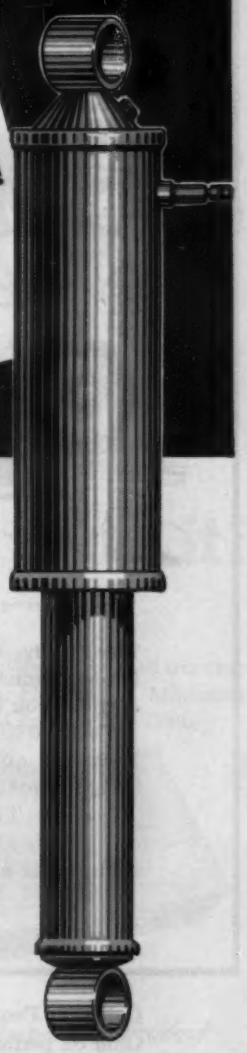
INLAND MFG. CO., Dept. MA-5, Jackson St., Omaha 2, Nebr.
Please send new free book, "Blueprint for Profits."

FIRM _____
(PLEASE PRINT)
ADDRESS _____
CITY _____ ZONE ____ STATE _____
BY _____ TITLE _____
If dealer, make of car sold _____
Are you now operating a radiator dept.? ☐ Yes ☐ No

# NOW... EVERY CAR YOU SEE YOU SELL!

## The Gabriel Load-Absorber

for BIG CARS! SMALL CARS! NEW CARS! ALL CARS!



You can make money hand over fist with the Gabriel Load-Absorber . . . and here's why:

- **This amazing new "load sensitive" suspension member is the one and *only* load-supporting device that automatically compensates for heavier loads without producing an unpleasantly stiff ride under normal loads!**
- **Load-Absorbers can give *any* car—even a brand-new model, right off the assembly line—a far quieter, more comfortable ride!**
- **They can help *any* car owner protect his investment, by promoting greater car control and safety under all road and load conditions . . . and by preventing undue strain on the rest of the car's suspension system!**

So don't wait until you see a station wagon or pickup truck to talk Load-Absorbers. Give a good sales pitch to every motorist who drives into your place of business. And remember that we're backing you up with a heavy barrage of national advertising . . . in *Sports Illustrated*, in *Outdoor Life*, in *Motor Trend*, and with a heavy, summer-long schedule on Monitor over the full NBC radio network! And we're promoting the full Gabriel line . . . shock absorbers as well as Load-Absorbers.

So *carry* the full line . . . and be sure to see your Gabriel jobber for complete information about the revolutionary new Gabriel Load-Absorber!

Gabriel
SHOCK ABSORBERS
LOAD ABSORBERS

**The Gabriel Company** • Cleveland 15, Ohio

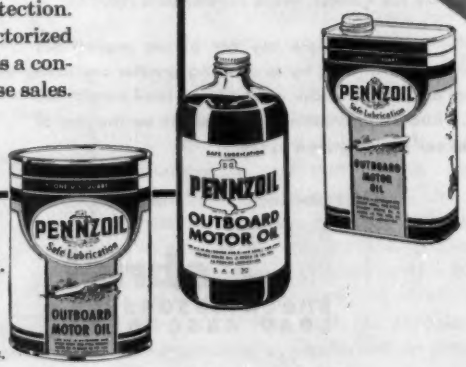
# DOUBLE YOUR PROFIT
## *with the* NEW TWIN PACK
## *. . . it sells two quarts instead of one!*




**This handy,** extra-profit Pennzoil package holds two quarts of famous Pennzoil Outboard Motor Oil in cans or bottles. Makes it easy for you to sell every outboard customer *two-to-go!*

This 100% pure Pennsylvania oil keeps plugs, rings and ports *clean*—for quick starts and smooth power at all speeds. The Tough-Film® in Pennzoil gives engine parts superior protection.

And the TWIN PACK is a valuable extra. The reflectorized carton is easy to carry. Easy to store in boat or car. It makes a convenient take-along supply of Pennzoil outboard oil to increase sales.




Call your Pennzoil distributor today for his Special Profit Offer on performance-proven Pennzoil Outboard Motor Oil. He's listed in the Yellow Pages.

*Member Penn. Grade Crude Oil Assn., Permit No. 2, Oil City, Pa.*



# 1 OUT OF 12 OF YOUR CUSTOMERS NEEDS A NEW REAR LAMP*

## ...and most of them don't know it!

More cars are rejected in highway safety inspections for burned out rear lamps than for any other cause.

Why? Because customers are seldom aware that rear lights are out.

Finding these burnouts is a service *you* can perform . . . for customers' safety and satisfaction . . . and for *your* profit.

So when a car is left for service, take a few seconds to check rear lights. Might as well check all essential lights while you're at it.

***There's no big stock problem either!** It takes only these 14 types of G-E Miniature Lamps for 85% of all car requirements. (6-volt) 1154, 63, 55, 1129, 1158, 51; (12-volt) 67, 1034, 57, 89, 1176, 1141, 53, 1073.

Check your stock of miniature lamps. Then call your G-E Lamp supplier and start looking for burned out rear lamps today. It pays off. General Electric Co., Miniature Lamp Dept. M-015, Nela Park, Cleveland 12, Ohio.



*Progress Is Our Most Important Product*

GENERAL ELECTRIC

*Source: '59 National Safety Check. The '60 Safety Check starts soon!

AC **SELLING *SLANTS***

MONEY-MAKING FACTS

## Push Your Spark Plug Sales Sky High with

# AC's BIG CARNIVAL OF

### *Eye-Catching Three-Dimensional Display Sells Them On New Fire-Ring Spark Plugs*

Here's how you can give your sales of AC Fire-Ring Spark Plugs a boost right now and all season long. Put the exciting Carnival of Power window trim to work doing a selling job that will send your AC profits soaring! This is a sparkling, three-dimensional display that's bound to attract customer attention. Featuring the new AC Extended Shell Spark Plug, it invites every motorist to help himself to new power and economy with a brand new set of better-than-ever AC Fire-Rings. The big extra feature of this window trim is a plastic, inflatable Fire-Ring which fits around the heavy cardboard AC Spark Plug and fire trail to give the display its three-dimensional effect. The art treatment on the words "Carnival of Power" pops out the shorter phrase "Car Power" which is what you and AC are both selling. AND THERE'S A BONUS: The Fire-Ring is actually a sturdy, vinyl Swim Tube that's certain to delight some lucky kid, once the promotion is over. Additional Fire-Ring Swim Tubes are available as traffic builders, through your regular AC supplier. Make sure you take advantage of the sales power of this outstanding display. It will help you bring to more motorists than ever the performance they get only with AC Fire-Ring Spark Plugs.

**CALL YOUR REGULAR AC SUPPLIER TODAY**




**COLORFUL, PRACTICAL "KEYBOARD", TOO!**

Here's another big plus you'll find in the AC Carnival of Power spring promotion. It's a useful and attractive "keyboard" for your customers' car keys. Made of heavy gauge metal, 15½" long by 5" high, it has ten hooks for keys. Hang it in your office or service area and you'll always know where to find the keys to any car in for service. Or, if you prefer, it will make a handy tool board for small, frequently used tools.

**ALL-IN-ONE PACKAGE**

It's easy to get all these sure-fire sales-building materials —the Carnival of Power window trim, the Swim Tube and the colorful keyboard. You'll receive them all in a single package for just $1.00, with any order of AC Spark Plugs. It's the promotional bargain of the year.

## New AC Fire-Ring Spark Plugs

# OF THE MONTH !

FOR DEALERS

# POWER PROMOTION !







## Backed by 3-Dimensional Advertising

**There'll be powerful national advertising giving three-way support to the AC Fire-Ring story this spring—strong commercials on the Art Carney TV Show; ads in *Life*, *Saturday Evening Post*, *Reader's Digest* and special interest publications; hard-selling messages on outdoor billboards in your area.**

## —They Must Be The Best!

AC SELLING *SLANTS*

MONEY-MAKING FACTS

# Get Set To Sell More Filters

# "AMAZING PERFORMANCE"

## Dramatic Display Links Great Profit Team . . .

This Spring, show your customers that something extra special is going on around your station. Make your location even more lively with this AC Oil Filter window display . . . and give it the bustling, gala air of a Spring Carnival. AC gives you an exciting theme for oil filter sales—"This Pair (oil and filter) Beats Four of a Kind (dirt, grit, soot and water)". This promotion combines carnival excitement with sound sales strategy for making more money out of oil filters and oil: Sell more oil filters, and you'll sell more oil. The two go together like ham and eggs—and you'll find rich profit opportunities by selling them both.



### You're in for a Heart-Warming Experience!

During AC's new Spring Oil Filter promotion, you can acquire a quality gift for your home that's an outstanding value: It's a Sheridan silver-plated chafing dish to thrill your lady of the home. Whether you're serving buffet dinner or a TV snack, this chafing dish will dress up your table with useful and gracious elegance. Equipped with water jacket, handled cooking pan and alcohol burner, its versatility fits dozens of occasions. Heavily plated with silver, it has the class of a cherished heirloom.

**ALL YOU HAVE TO DO!**

You can participate in AC's big Spring Oil Filter promotion by ordering any 36 AC Triple-Trapper Oil Filters and the Spring Promotion Package, OFM-61 from your AC representative. Include $17.85 for the promotion package and you'll receive:

- The elegant Sheridan silver-plated chafing dish.
- The complete AC Oil Filter "Carnival" Window Trim.
- Six popular-type AC Triple-Trapper Oil Filters worth $17.85.

When you sell the filters included in the promotion package, you'll have recovered your investment of $17.85!

# SELL AC TRIPLE-TRAPPER OIL FILTERS...

# OF THE MONTH !

FOR DEALERS

## and More Oil With This

# SPRING PROMOTION!




**ONLY AC GIVES YOU THIS COMPLETE ADVERTISING SUPPORT**

You can be sure that your oil filter prospects will be sold on AC Oil Filters through AC's high-frequency Spring advertising support. They'll see and hear the Triple-Trapper story in a wide variety of places: on Art Carney's nation-wide television show on NBC-TV ... in *Life*, *Saturday Evening Post* and *Reader's Digest* and in special-interest magazines. You'll find them in a buying, responsive mood toward the AC Triple-Trapper when they pull up to your station!

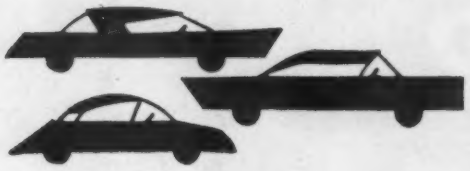





AC SPARK PLUG ⚛ THE ELECTRONICS DIVISION OF GENERAL MOTORS

# THE FINEST PROTECTION MONEY CAN BUY!

# Use *Packard* for all your Packard Electric cable



than all other connectors to HI & LOW

BATTERY cable and T.V.R.S. packaged for profit with

AUTOMOTIVE cable needs.

is used on more new makes combined. From tension cables through



( TELEVISION-RADIO SUPPRESSOR ) cable, it's helpful data on the




Packard Electric

Warren, Ohio

GM GENERAL MOTORS

"Live Wire" division of General Motors

# MOTORCRAFT...




## an all-new line of quality replacement parts now at your jobber's



# BE SURE OF QUALITY THAT PROVIDES CUSTOMER SATISFACTION... INSTALL **MOTORCRAFT** PARTS

Now you can install quality MOTORCRAFT replacement parts . . . help increase high-profit repair business by building customer good will. MOTORCRAFT parts—specially introduced for service stations and independent garages—are obtainable only from your jobber, who supplies so many of your other needs. With MOTORCRAFT parts, you also receive the most complete Quick Reference catalogs available. Call your jobber today.

PRODUCTS OF FORD MOTOR COMPANY



# BODY SHOP TIPS

### Easy Way To Repair Dodge Door Handles

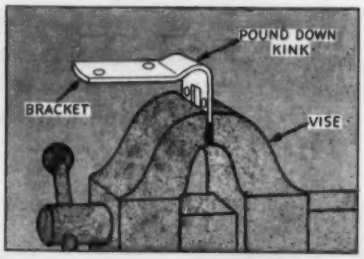
I have a repair on Dodge outside door handles. Many times the 1957–59 handles do not seem to have enough release travel. I build up the release pawl where it contacts the lock slide. This has fixed several complaints. *Russell R. Bates, Emerson A. Lutz Motors, Dodge, 1013 Remschel Ave., Kerrville, Texas.*

### Reworked Panel Cutter Tip Removes Phillips Screws

Sometimes Phillips Head screws on door hinges and other places are mighty hard to break loose. Take an air panel cutter which most body shops have and use one of the cutters with a broken tip. Then grind it down into a pointed end similar to a Phillip's tip with two sides flat, so a 7/16 open end wrench will fit on it. Put it in the air gun and you can break loose almost any Phillips Screw very easily. *Chet Robertson, 2335 N. W. Thurman, Portland, Ore.*

### Straightening Bumper Brackets After A Collision

On a '55–56 Chevrolet front bumper brackets which have




been bent from a front end collision, the two ears will always be pressed together considerably. They are sometimes hard to locate so I put them in a large vise and pound down on the kink. You will be surprised how they straighten. *Victor Sipla, R.R. 1, Grand Marsh, Wisc.*

### Using Plastics To Fasten Body Moldings

When installing belt molding chrome and other light chrome on certain makes of cars where clip areas have been damaged, we find that time can be saved by installing this chrome with body plastic. This can be accomplished by grinding a very small area, which can be hidden by the chrome, around the attaching holes and applying a small gob of plastic to each hole. The next step is to press and hold the chrome firmly in place until the plastic hardens. The plastic tends to flow around the lips of the chrome and adheres to the ground metal also running through the hole to form a "buttoning" affect. We find it saves time by making it unnecessary to remove interior panels. We've never had a comeback. *Richard Goff, Body Shop, Vrooman Buick, Westport, New York.*







**HELLER TOOL CO.**

HELLER TOOL CO. SINCE 1856

America's Oldest File Manufacturer
NEWCOMERSTOWN, OHIO
Subsidiary of Simonds Saw and Steel Co.

*Branch Offices and Warehouses: Newark, N. J. • Detroit • Chicago • Shreveport • Los Angeles • Portland, Oregon*

save time...
save money
*with these complete*
**REPAIR KITS**

—all the parts needed for a trouble-free repair job.



**jack-pack**

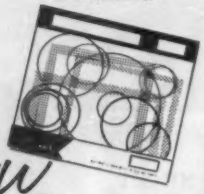
**HYDRAULIC JACK REPAIR KITS.** All Makes... All Models. Easy to install in spare time.



*NEW*
**noz-l pack**

**NOZZLE REPAIR KITS**

One kit repairs all BUCKEYE nozzles.
One kit repairs all OPW nozzles.



*NEW*
**jack-pack**

**COMPLETE SEALING LINE FOR AUTOMATIC TRANSMISSIONS**

★ Overhaul Kits
★ Gaskets & Rubber Sets
★ Sealing Ring Sets



"HOOT MON! It's thrifty to use these performance proven kits made by JACK-PACK. *Order from your jobber today—or write for illustrated brochure!*

**jack pack**

Manufacturing Co. Box 32188
2115 N. Marianna Ave.
Los Angeles 32, California

## Austin Engine . . . . .

*Continued from page 72*

after assembly. Cylinder head should also be cleaned in this manner, after all components have been removed from the cylinder head.

Mike up cylinder bores and decide what oversize to bore out to. Maximum safe oversize is .040 inch. New piston assemblies are supplied with pins and rings fitted at the factory. However, it is always good practice to check ring gaps in bore before installation. Pistons are marked on the top with the words "front." The wrist pin lock screw in the rod is fitted to the piston facing the camshaft.

Check crankshaft journals and have turned if required. Blow out all crankshaft passages before installing into bearing saddles. Check main bearing shells in saddles for correct alignment of oil supply holes.

Camshaft front bearing is removable. The other bearings are the cast iron block itself. When replacing front cam bearing, align oil holes and press into place. Diametrical running clearance should be .001 to .002 thousandths of an inch.

Check oil pump rotor to case clearance and if found excessive replace pump assembly.

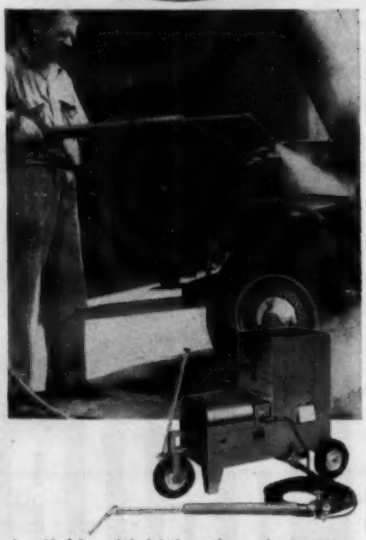
### Cylinder Head

It is always a safe policy to replace the valve guides when doing a major overhaul. This guarantees effective sealing oil clearance at the guides, so essential in overhead valve engines. Guides should be pressed in from the top. Install inlet guides with largest chamfer to the top. Exhaust guides with their counter bores towards the valve seats. Press guides into head, until distance from top of guide to spring seat is $1\frac{9}{32}$ of an inch.

Reseat the valve seats in the cylinder head by grinding or reaming. Exercise caution by either method as no steel inserts are used. Valve seat angle for intake and exhaust is 45 degrees. Valve running clearance is .011 thousandths of an inch hot .012 thousandths of an inch cold. Torque cylinder head nuts to 40 pounds feet. Install all new gaskets and oil parts thoroughly during assembly.

**add a clean-up to your tune up**

with the VAPOR 80 UPGRADER STEAM CLEANER



Available with high-volume hot-water rinse. "U" fitting mixes steam jet with water—provides 250 gal/hr at 150°. Cleans service vehicles, engines, machinery, grease pits, floors, driveways...prepares cars for undercoating...exposes surfaces for inspection and easier maintenance.

Vapor "80" Steam Cleaner whisks away mud, grease, caked dirt, frozen sludge in minutes. Instant steam from cold start. Delivers 100 gallons per hour of balanced high-pressure cleaning solution at 120 psi. Uses only 1¼ gallons of fuel per hour. Simple, rugged construction for years of rough, tough service.

*for the big jobs . . .* VAPOR 200

- Fully automatic—turns on and off from gun handle.
- Easy-to-operate flip start switches.
- No valves to adjust.
- 200 gal/hr @ 120 psi.
- Built-in soap solution tank.
- One unit can supply two steam guns.
- Easily portable (wheels optional).
- Complete with wire-braided steam hose.
- Optional warm-water rinse (400 gal/hr @ 150° F.).



*write for full information!*

**VAPOR HEATING CORPORATION**

80 E. Jackson Blvd., Chicago 4, Dept. 56-E




Texaco Dealers are getting thousands of new customers as a result of Texaco's big Spring TV Contest, now in full swing. Many of them will become *permanent* customers! This is another example of the support Texaco gives its Dealers with seasonal promotions. Full-page ads in 6 leading national magazines will be seen by 75 million readers. On television, the Texaco Huntley-Brinkley Report will tell millions of motorists about this big promotion. There will also be a saturation of TV spot announcements. Newspaper ads will blanket the country. Outstanding display material will attract motorists into Texaco stations. For Texaco Dealers it adds up to more traffic, more *new* customers, more sales. No wonder Texaco Dealers are such *busy* Dealers! They *make more* by selling the best . . . **TEXACO**

MAS

A PROMISING FUTURE is one of the advantages of being a Texaco Dealer or Distributor. There may be an opportunity for you. Investigate — send this coupon to Sales Manager, Texaco Inc., 135 E. 42nd St., New York 17, N.Y.

I would like complete information about the possibility of my teaming up with Texaco as a: ☐ Dealer, ☐ Consignee, ☐ Distributor. (Please check)

NAME_____

STREET_____

CITY_____ ZONE_____

STATE_____

## New Products . . . . . Continued from page 62

### Mechanical Valve Lifter

*Features hardened, self locking adjusting screws*

**Thompson Products: Announced** recently is the addition of mechanical lifters to company's valve parts line. Lifters for practically all mechanical applications are included. Adjustable lifters in this new line feature hardened, self-locking adjusting screws. All lifters are replaced by new design adjustable lifters. A special wrench for holding these lifters while lash settings are made is packaged with each set of eight Ford lifters. *Write: Thompson Products Replacement Division, Thompson Ramo Woolridge, Inc., 6902 Cedar Ave., Cleveland 3, Ohio.*





outdates all mats without this miracle material

IT PAYS TO CHECK MOTOR MOUNTS

Don't wait 'til it's too late! Check mounts with every motor or with each transmission repair job.

Next time you order protector mats, insist on this new miracle material ...the new standard of quality. It has a soft luster-sheen finish that adds sparkle to any car interior...new or old. A complete family of mats in five colors for front and rear floors.

*Trade Mark

360

DOAN MANUFACTURING
1728 London Road • Cleveland 12, Ohio
A DIVISION OF ANCHOR INDUSTRIES, INC.


### Degreasing Booth

*Leg-Type booth requires only small space*

**DeVilbiss Co.: Economical cleaning** can be accomplished through use of a compact degreasing booth now available. The leg-type booth requires only a 3 × 3 foot space and can be used for degreasing, mist oiling, cleaning and touch-up painting. An exhaust system carries off fumes and a recovery system provides savings in the solvents used for cleaning. If air is not already available, a compressor can be mounted beneath the booth, requiring no additional area. The cleaning gun will also serve to blow off the solvent and dry the parts when the fluid tube is withdrawn from the supply tank. *Write: H. A. Lange, Mgr. of Adv., The DeVilbiss Co., 300 Phillips Ave., Toledo 1, Ohio, or phone GReenwood 4-5411.*



### Air Chisel

*Features one-piece barrel and cast iron handle*



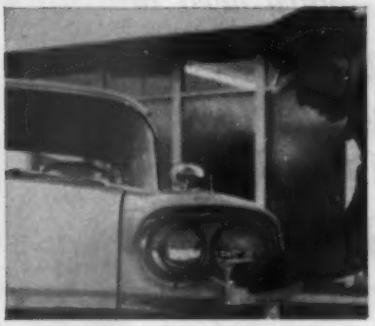
**Albertson & Co.: New air driven** chisel known as the Sioux Slugger has been introduced. Major applications in auto service and body shops include quick removal of mufflers, tail pipes, door posts,

*Continued on page 92*

# 6 Ways to extra headlamp profits in 5 minutes . . . day or night!



**REPLACE BURNOUT *AND* MATE.** When one 4002 goes, chances are the other's just about had it, too. Why wait? Save your customer time, trouble and inconvenience. Suggest that he replace 'em both. You'll double your profit.



**LOOK FOR CRACKED LENSES *AND* BURNOUTS.** When you're cleaning lenses, check for cracked or broken ones. While you're at it, have the driver flick on his lights, high and low, to spot burnouts. You'll save him trouble on the road . . . and increase your profit.



**REPLACE OBSOLETE 7" HEADLAMPS.** All 5000 series headlamps are obsolete. New 6000 series Vision-Aid Headlamps with Spotlight Low Beams vastly improve in-traffic visibility. More powerful high beams make open road driving safer and easier, too.



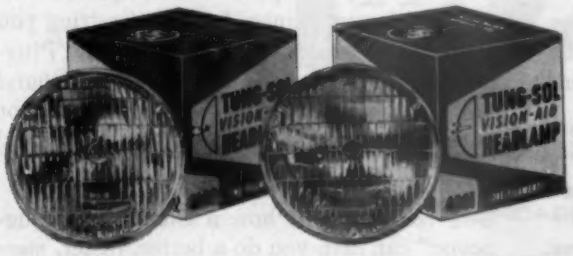
**RACK UP *EXTRA* SALES.** Check headlamps before you start that lube job. Replace 'em when the car's on the rack. It takes only minutes to install a pair of Vision-Aid Headlamps. You'll add extra profit, too.




**CONVERT "COURTESY" CUSTOMERS.** Whenever a transient stops—for a road map, directions or comfort—take a look at his headlamps. When you spot burnouts, cracked lenses, or obsolete 7" lamps, sell him a pair of Vision-Aid Headlamps, and boost your profit.



**AIM FOR SAFETY *AND* PROFIT.** Everytime you replace a headlamp, sell a complete aiming job to match the beams accurately. Extra service brings extra profit.





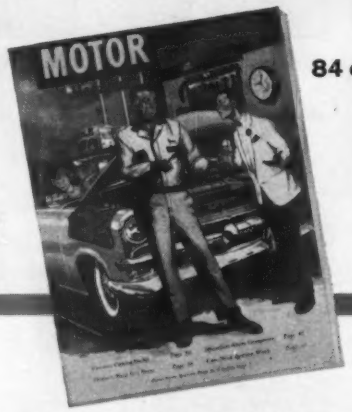


# TUNG-SOL®

HEADLAMPS • MINIATURE LAMPS • FLASHERS

# 46 of every 100 cars

*The latest survey by Motor Magazine shows most cars on the road today need ignition service. Here are the facts on services needed, and how a Champion "Plug-Scope" can help you spot the leading cause of trouble—worn spark plugs . . .*




**Ignition Defects Discovered by Motor Magazine Survey**

**84 of 100 cars checked needed one or more of these services—**

**Need new spark plugs.....46 of 100 cars**

**Need new distributor points.....41 of 100 cars**

**Need new caps, coils, rotors, other...29 of 100 cars**

**Need new ignition wires.....17 of 100 cars**

*Reproduced from MOTOR Magazine, June 1959, Copyright 1959, The Hearst Corp.*

**The survey showed** that worn spark plugs are the leading cause of ignition trouble—affecting nearly half the cars on the road today. (That means *every other* car you service probably needs new spark plugs.)

**The survey also showed** that most motorists don't know they need work done on their cars. That's why it is up to you to discover worn spark plugs and point out the need for replacement to your customers. And that's where the Champion "Plug-Scope" comes in.

**The Champion "Plug-Scope"** is the fastest, easiest way ever to *check* and *sell* spark plugs. It enables you to inspect a whole set of spark plugs *electronically*, right in the engine. The Champion "Plug-Scope" saves you time because you can check a set of plugs in less than a minute—and it saves you work because you don't have to pull a single plug. In addition, the Champion "Plug-Scope" is a real sales-maker—because your customers can see for themselves on the "Plug Scope" when they need new spark plugs.

**Besides increasing your sales of spark plugs,** a Champion "Plug-Scope" will open up opportunities for you to sell other items. For example, new plugs usually go hand-in-hand with new points. And, by "getting you under the hood," the Champion "Plug-Scope" gives you a chance to look around and discover batteries, fan belts, radiator caps, air filters and other items that need replacing.

**See for yourself** how a Champion "Plug-Scope" can help you do a better, faster, *more profitable* job of servicing your customers' cars. Ask your Champion supplier for a "Plug-Scope" demonstration right away.

CHAMPION SPARK PLUG

# need new spark plugs



ONLY $49.95

## *The CHAMPION "PLUG-SCOPE" electronically checks a whole set of spark plugs right in the engine in less than 60 seconds!*

With just four fast connections—to battery terminals, distributor or coil (whichever is handier in the engine) and any spark plug cable—the Champion "Plug-Scope" is hooked up and ready to check plugs.

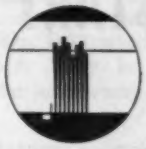
Then, you accelerate the engine and release immediately, watching the red warning line on the "Plug-Scope" screen. If traces rise *above* the warning line, plugs need attention—if they remain *below* the line, plugs are all right. It's that simple!

**MAKES SPARK PLUG CHECKING AS EASY AS WATCHING TV!**






SATISFACTORY SPARK PLUGS



UNSATISFACTORY SPARK PLUGS

DEPENDABLE

**CHAMPION**

SPARK PLUGS



COMPANY • TOLEDO 1, OHIO

rocker panels, floor boards, grill bars and body panels. Attachments include a chisel, rivet buster, extension chisel, punch, scraper, metal punch, panel crimper, spot weld breaker, and metal cutter. Advantages are said to be savings in torches, and gas, less body filling, and less danger of fire or explosion. *Write: Albertson & Co., Sioux City, Iowa.*

### Spark Plug Holding Sockets

*Prevents plug damage, burned fingers*

**Proto Tool Co.: Designed for** easy handling, the new Proto No. 5000M Spark Plug Holding Socket Merchandiser contains 5 No. 5026HP sockets (⅜ in. drive) and 3 No. 5326HP sockets (½ in. drive). Sockets are equipped with patented neoprene inserts which hold spark plugs firmly, preventing porcelain and electrode damage, and permitting mechanics to work on hot blocks without burning their hands. These spark plug sockets fit the universal size plug—14 mm.—on both foreign and domestic cars. The socket bodies are knurled for finger turning, and so designed that they may also be turned with flat wrenches, ratchets, torquers and hinge-handles. *Write: Proto Tool Co., 2209 Santa Fe Ave., Los Angeles 54, Calif.*




HAPPY CU$TOMER$



$TART WITH BENDIX DRIVE$

Service reputations are based on happy customers, and automobile service outlets have found through the years that genuine, factory-new Bendix* Starter Drives go a long way toward making new friends and keeping old customers happy. With over fifty years of leadership in its field, Bendix Starter Drive gives reliability and quality performance that keep customers happy—and with happy customers you've got yourself a good service reputation . . . added new and repeat business, extra profits. Be sure of customer satisfaction—order only genuine, factory-new Bendix Drives and parts from your distributor.

*Reg. U. S. Pat. Off.

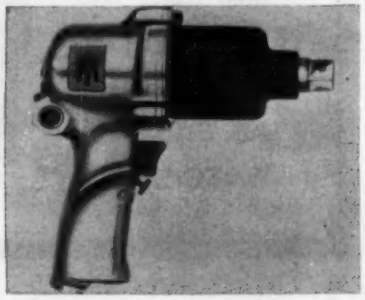
Bendix-Elmira
Eclipse Machine Division
Elmira, New York

Bendix AVIATION CORPORATION


### Impactool

*Handles nut running jobs on cars and trucks*

**Ingersoll-Rand Co.: A new size** 407 Air Impactool, for automotive service work is being marketed. This new tool features more power and uses less air than the tool it supersedes, company states. In addition, it is 4½ times faster, 3 3/16 inches shorter and 2⅝ pounds lighter than the previous model. The



407 Impactool is equipped with a steel hammer case. With the high power-to-weight ratio of the 407 Impactool, mechanics will find that it will capably handle nut running jobs on everything from passenger cars to medium

*Continued on page 97*



# Paid for by extra profits earned by Jenolizing!

Imagine you at the helm of your own boat . . . skimming briskly across a nearby lake, chugging slowly across your favorite fishing spot.

And the delightful prospect is—you can do just that with the extra profits Hypressure Jenny® can bring you! Many dealers across the nation are buying luxuries for themselves and their families with the terrific earnings they make with Jenolizing, a unique steam cleaning and waxing process.

Send us the handy coupon. Find out how easily you can get into Jenolizing . . . how quickly you can start making bonus profits that pay off in new benefits for you and your family.

**Now—New Homestead Multi-Job Washer washes cars, cleans motors—does many other jobs. Only $325.00**

**Ben Gay makes $173 a week EXTRA**

Ben Gay, owner of Ben's Carter Service in Portland, Oregon, does a general service station business including small repair jobs. Since January, 1959, when he purchased a Model 750 Hypressure Jenny, he has averaged $173 BONUS business for just twenty-one hours work a week!



Send me full information on Jenolizing: "Bulletin AEP-1" and full details on the new Homestead Multi-Job Washer.

Name.....Title.....

Company.....

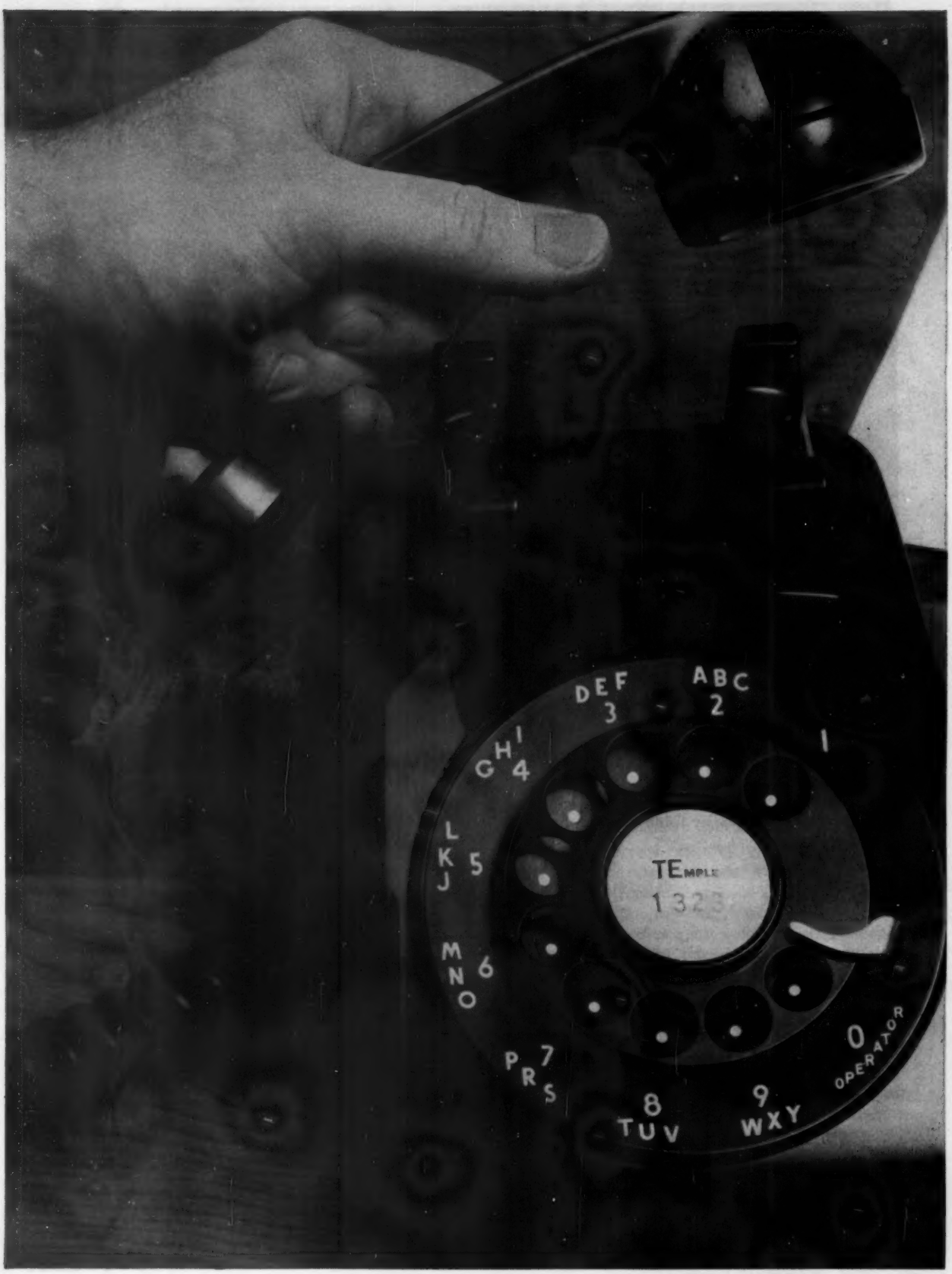
Address.....

City.....Zone.....State.....

14

hv

**HOMESTEAD VALVE MANUFACTURING COMPANY**
Hypressure Jenny Division,—Coraopolis, Pa.
(In Canada: Hypressure Jenny Sales and Service Ltd., 517 Jarvis Street, Toronto 5, Ont. C. S. A. Approved)


DEF 3
ABC 2
1
GHI 4
L
K 5
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TEMPLE
1323
M
N 6
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P 7
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TUV
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WXY
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OPERATOR




# ONE CALL THAT'S ALL!

**GENUINE FORD FALCON PARTS are available in quantity only at your Ford Dealer's. Call him for all your Ford replacement parts.**

You're probably never more than a few yards away from any Genuine Ford Parts you want . . . a phone call will do it!

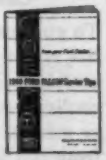
But *convenience* and *speed* are just part of the story! Genuine Ford Parts are *made right, to fit right, to last longer!*

That means you know what you're getting!

You *know* you're getting Super-Quality Parts . . . built to the highest quality control standards in the world!

You *know* your *customer* knows you're giving him quality parts, because he *knows* that familiar FoMoCo box and its famous name.

You know, too, you'll get good service *right out of stock* . . . from parts *stocked in* depth! And you'll profit, too, from your Ford Dealer's *Supermarket Prices!*



GET YOUR FREE FALCON SERVICE TIPS! Just ask your Ford Dealer

But don't forget that Ford Super Quality is now available in universal parts for different-make cars and trucks. You can be sure of their uniform high quality.

Call your Ford Dealer soon!

***Don't miss the Parts Specials at your Ford Dealer's Trading Fair***

GENUINE Ford PARTS

SUPER-QUALITY PARTS
SUPERMARKET PRICES
STOCKED IN DEPTH

# New Du Pont Telar™ is the first NEVER DRAIN anti-freeze and anti-rust coolant!

Climaxing 5 years of research and car tests, Du Pont presents "Telar"—the first and only anti-freeze and anti-rust coolant that can be safely left in year after year. As long as the cooling system is functioning properly, "Telar" never needs to be drained—you merely add to it. "Telar" is full strength, *not* diluted. Just add it to any water to give the degree of protection desired.

### NEVER NEEDS DRAINING

Why doesn't "Telar" anti-freeze and anti-rust coolant need draining? The corrosion inhibitors in ordinary anti-freezes gradually break down through high mileage, air suction, exhaust leaks, hot spots, etc. Then rust clogging starts unless the anti-freeze is drained. But "Telar" stands up and stays fresh where others break down.

### PERFECT SUMMER COOLING

"Telar" reacts with the metal surfaces of the cooling system to form a *chemical armor* against rust and corrosion. It rust-proofs all cooling system metals—including aluminum. By keeping the car's cooling system clean and free-flowing, it maintains perfect cooling summer and winter.

### CONTAINS COLOR CHECK

To guarantee peace of mind, Du Pont has added Color Check to "Telar". If anything should go wrong with the cooling system, like a faulty water pump or gasket, the solution's color changes from red to yellow to warn you *before* further trouble develops. As long as it's red, you *know* it's giving complete protection against rust and corrosion. If it turns yellow, it's a warning to drain and discard the solution and repair the cooling system. In 5 years of road tests this rarely happened.

### MORE SALES, MORE PROFITS

You make $1.65 on every gallon, and every sale builds repeat business. Because only "Telar" can be added to "Telar", the customer comes back to you to make up solution losses and resulting dilution which lessens the degree of anti-freeze protection. Because nobody wants to drain anti-freeze, all your customers are prospects for "Telar".

### PATENTED FORMULA:

- Prevents freezing in winter!
- Maintains perfect cooling in summer!
- Rust-proofs all cooling system metals all year round!
- Contains Color Check which changes the solution's color if cooling system trouble contaminates it!




Introducing new "Telar"—for the protection car owners want—the profits you want!

**Commands installed price of $5.00 per gallon!**
**Pays premium profit on every sale!**
**Sold exclusively through servicing dealers!**

Telar™

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

*... made by the makers of ZEREX® and ZERONE®*

trucks, company claims. *Write: John K. Uhler, Ser. Lit. Dept., Ingersoll-Rand Co., Memorial Parkway, Phillipsburg, N.J., or phone GL 4-2121.*

### Hydraulic Jack and Stand

*Used for servicing Corvair power train*

**Edmund J. Wudel Mfg. Co.:** Introduced is a No. 700C Wudel Jack, No. 57 Corvair Adapter and No. 57 Stand for servicing the Corvair Power Train. One mechanic it is said, can handle the Corvair power train with this complete package. The Jack features: 1000 pound handling capacity, a lifting range from 7½ inches low to 32 inches high. The pump handle rotates 360 degrees, and carrier tilts forward to 80 degrees. The new No. 58 Wudel Stand is specifically designed for the Corvair power train. All repairs can be made on the stand, except complete dismantling. *Write: Edmund J. Wudel, Owner, Edmund J. Wudel Mfg. Co., 6082 Ferguson Drive, Los Angeles, Calif., or phone Ramond 3-2059.*

### Tire Changer

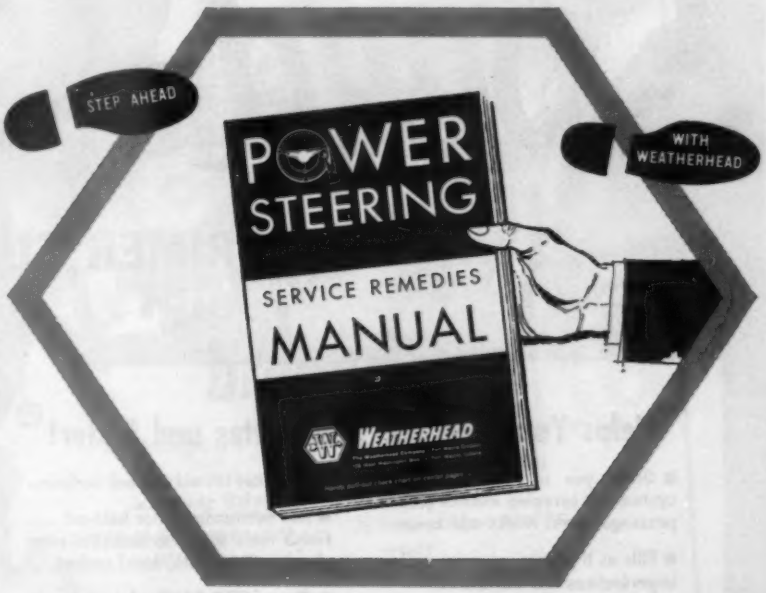
*Can change new 13 inch tires*

**Bishman Manufacturing Co.:** Recently introduced is the Bishman 880-58 Air-Electric Tire Changer for all tire sizes from 12 inch through 17½ inch. The built-on air powered double bead breaker will break both beads at one stroke with a rolling action. A combination of wide breaker shoes and long stroke drops both beads into the center well and eliminates the need for rotating the wheel for a second stroke. The electric power driven mounting and demounting tool does both operations with one setting for wheel size. Tires, such as the 13 inch are lifted off and slipped on by touching the foot switch company states. *Write: Bishman Manufacturing Company, Route 2, Osseo 26, Minnesota.*

### Stop Lamp Switches

*Designed to fit American and foreign made cars, trucks*

**Cole-Hersee Company:** The new "Stop Lamp Switch" merchandizer is introduced. This SP-8708 selling aid consists of twenty-six individually boxed stop lamp switches. They are designed to fit any American or foreign made automobile or truck on the road today, the company states. Display has twelve drawers with movable separators. These drawers are labelled with a switch number in bold type. Included with this display are two automobile and truck Application Sheets. *Write: Cole-Hersee Co., Boston, Mass.*




**NEW! for you**

Here's a sales-building sixteen-page booklet that takes the mystery out of power steering repairs. Written with the mechanic in mind, it contains service tips by some of the leading automotive trade paper editors—and a special center-spread pull-out chart that gives you an easy-to-read, easy-to-understand check list of common power steering complaints and cures.

Once you've read through this handy little pocket manual, you'll realize how easy—and how profit-packed—power steering service jobs are. Most of them merely involve a few minutes' work replacing the hose assemblies. And Weatherhead has made that easy for you, too—with the famous pair, the PS-6 assortment (for smaller shops just getting into the business) and the PS-18 assortment (for volume dealers).

Order your assortments—and your Manual—from your Weatherhead Jobber today. Every day you delay you're letting your competitor grab plus profits from you.

**WEATHERHEAD** the original equipment line

THE WEATHERHEAD COMPANY · Ft. Wayne Division

Dept. 618 · 128 West Washington Blvd. · Ft. Wayne, Indiana

# Now . . . A Giant Stride Ahead In Modern Fleet Refinishing!

## DITZLER'S NEW Speed-Sand

### SYNTHETIC PRIMER SURFACER

### Helps You Turn Out Jobs Better and Faster!

- Gives you a straight synthetic system for spraying enamel jobs on passenger cars, trucks and buses.
- Fills as it primes, covering surface imperfections and file marks.
- Dries through to an even, smooth finish in half the time . . . Jobs can be sanded in two or three hours quickly and easily without sand scratches.
- Provides firm bond between metal surfaces and finish coat on steel and aluminium.
- Does not lift old enamel surfaces.
- Has outstanding color hold-out . . . Finish coats dry with beautiful even gloss on its smooth, level surface.
- New SPEED-SAND also makes a good non-sanding primer. Just spray one full wet coat, let dry for half an hour, then apply enamel color coat.
- SPEED-SAND is available in White DPS-8, Gray DPS-30, Cream DPS-80, and Red Oxide DPS-70.




*You'll find you can reduce time and labor costs with the new SPEED-SAND Synthetic Primer Surfacer. Try it on your next refinishing job.*

Ditzler Color Div., Pittsburgh Plate Glass Company, Detroit 4, Mich.

DITZLER®

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

# ATTENTION, CAR OWNERS!

## Report to General Overhaul




## *Fight hot weather breakdown*

- ☆ Change Oil
- ☆ Lubricate for summer driving
- ☆ Drain worn-out anti-freeze
- ☆ Flush cooling system
- ☆ Install water with rust inhibitor
- ☆ Inspect for winter wear

**General Overhaul** is leading this campaign at service stations and automobile dealers in your area. Get your car ready for summer now.

**COOLING SYSTEM MAINTENANCE WEEK**
**May 16-22**

Union Carbide Chemicals Company, Division of UNION CARBIDE Corporation

**General Overhaul is campaigning . . .** LIFE magazine is working . . . government leaders are proclaiming . . . Union Carbide is beating the drum . . . Join this big parade for COOLING SYSTEM MAINTENANCE WEEK, May 16-22, and march toward more profits. Sell your customers on summerizing their cars NOW! Union Carbide Chemicals Company, Division of UNION CARBIDE Corporation, 30 East 42nd Street New York 17, New York.

## Mufflers . . . . . *Continued from page 39*

tion at a local muffler shop for exactly $13.00—with free installation.

The mechanic quickly replied, "I have to charge for my labor, ma'm, sorry." She left. Later he was prompted by his jobber to look up the list prices of the parts and add his labor. Parts and labor together came to exactly $13.05!

It will pay you to find out for sure if the installation in the muffler shop is *really* free. Some operators honestly do install free. Others install the muffler free and then charge $2.50 labor for the pipe, even though installed with the muffler.

And most muffler shops—no matter what their muffler and pipe installation deal really is, charge 65¢ or 75¢ for a clamp which lists at 35¢. And they make sure every clamp is replaced, as well as brackets—which are also sold at up to twice the list price.

So you see on a dual job, just four clamps at 75¢ each (cost about 20¢ each) can increase his gross profit by about $2.20.

Are these or similar practices in effect in your locality? Find out! Get actual quotes on the installation of popular numbers of mufflers and pipes, separately and together. Compare them with list price plus flat rate or the prevailing legitimate installation charge.

Then—if the figures show what they often show in other markets—have the information on hand at all times to use on motorists who talk price.

### Speed of Service

The average service station, garage or car dealer can complete an *entire installation in 15 minutes!* Many independent dealers will find this hard to believe; but the fact is that with the proper tools, any reasonably-skilled mechanic can install almost every muffler, tail pipe and exhaust pipe in 15 minutes or less—provided he has the necessary parts on hand when the customer drives in.

The secret to successful, profitable and quick installations is the pneumatic impact hammer, specially designed for muffler and pipe work. The various models of muffler guns available from the larger muffler manufacturers are sturdy, easy to use; they are highly maneuverable and relatively inexpensive. Valued from $50 to $100 at retail cost, they are being offered in special deals that enable the dealer to obtain a gun for as little as one-fourth the regular price with the purchase of from five to nine mufflers. They easily pay for themselves in extra business, time saved and extra profits from reduced labor costs to the dealer.

Another effective 15-minute installation tool is the acetylene torch. It too will do the job in 15 minutes (not counting torch warm-up). A drawback here, though, is that the torch is harder to handle and in many cities and states is banned from use on the undercarriage of a car.

### "Lifetme Guarantee"

One of the hardest claims to buck is the so-called "unconditional lifetime guarantee." Better Business Bureaus in various sec-



tions of the country have checked these statements and have determined that the "lifetime guarantee" is effective only as long as the car remains in the possession of the person buying the replacement muffler. Provided also, the guarantee slip is not lost and the muffler fails when the motorist is near a muffler shop which will honor the guarantee.

If he sells his car, the guarantee is void and cannot be transferred. As cars change hands on the average of every four years, it is apparent that the guarantees are neither "lifetime" nor "unconditional."

It is a favorite trick of muffler shop operations to advertise and distribute embellished, legal-looking, imitation parchment guarantee certificates which are headlined "Unconditionally Guaranteed." But they contain fine print that lists enough conditions to let any muffler specialist off the hook from all his dissatisfied customers.

It is true that many muffler shops do actually make amends to disgruntled customers, but the customer has no assurance of this from the wording of the guarantee.

A typical complaint received by the Cleveland Better Business Bureau was from a man who claimed he had a blow-out in his "lifetime" muffler. The muffler shop dealer said rust caused the problem, even though the purchaser contended there was no rust around the hole in the muffler.

A replacement was refused. When the customer argued, the dealer advised him to send it back to the factory for proof that the problem was blowout instead of rust.

In other words, this particular guarantee applied only to "blow-out." Yet this was not stated in the advertising that lured the customer to the shop in the first place. If this particular customer had sent the muffler to the manufacturer as the dealer advised, he would have been unable to use his car for no one knows how long.

The dealer in question informed the Bureau that a blowout, to qualify for a replacement under the guarantee, had to be "an opening clean across the length of the muffler at the seam."

The Chicago BBB reported: "Motorists whose muffler actually blew out have come to us to report that while they got a 'free' muffler, all right, the labor charges for the installation were almost as high as a new muffler installed would have cost them."

**High Labor Charge**

The labor charges attached to "free" replacements made under the usual guarantee average from $3.50 to $4.50 per muffler. Considering that specialized muffler shops advertise 15-minute installations, the unwary motorist is paying at a rate of from $14 to $18 per hour for having a muffler replaced under his guarantee.

Obviously no muffler shop laborer makes anything near that wage. How many customers would a muffler shop attract if this fact was generally known to the public?

Ask yourself: Is the muffler shop in your area really giving a lifetime guarantee? It *may* be. Some of these operators are sound, honest

*Continued on page 102*

McQUAY-NORRIS

CHROME CONTROL

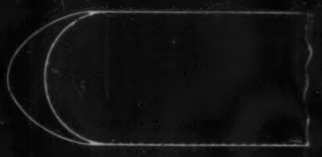
LEAK-PROOF

PISTON RINGS



*Because they stand up!*

NEW SLO-CHROME MEANS LONGER LIFE



SLO-CHROME—exclusive with McQUAY-NORRIS—is a special, unhurried plating process whereby dense, fine grain chrome is carefully applied to assure immediate and permanent oil control. SLO-CHROME is more expensive to produce than other types of plating, yet costs you no more. SLO-CHROME is used on all steel rails, and on top chrome rings.

SEVEN WIPING EDGES

The famous Leak-Proof piston ring set (including the outstanding "400" oil ring) has seven (count 'em) wiping edges. No other ring set has so many wiping edges to save your customers gas and oil.



## Mufflers . . . . . Continued from page 101

businessmen who are making good on them.

If their guarantee is valid, are they making good on the complaints at all times—Or just when they can't talk their way out of it? Find out!

And if the guarantee is weasel-worded—if it's not properly honored at all times—turn his weapon into your ammunition by letting your customers and the Better Business Bureau know about it.

One good way to establish yourself as a muffler installer and to cash in on the manufacturers' national advertising is to display one of the large A-board signs available from each of the major muffler manufacturers. One large muffler manufacturer has sold over 45,000 dealers such money-making signs. The charge was about one-fourth the price a dealer would pay for a wooden, hand painted model of the same size.

Did it ever occur to you that a motorist driving down street after street, seeing muffler sign after muffler sign will wonder why no one seems to have those cut-rate muffler brands except three or four often-grimy, out-of-the-way places? There are, at most, less than 1500 muffler shops in the country. Compare this to 40,000 car dealers, 86,000 repair shops and 181,000 service stations—over 300,000 outlets versus 1500 muffler shops.

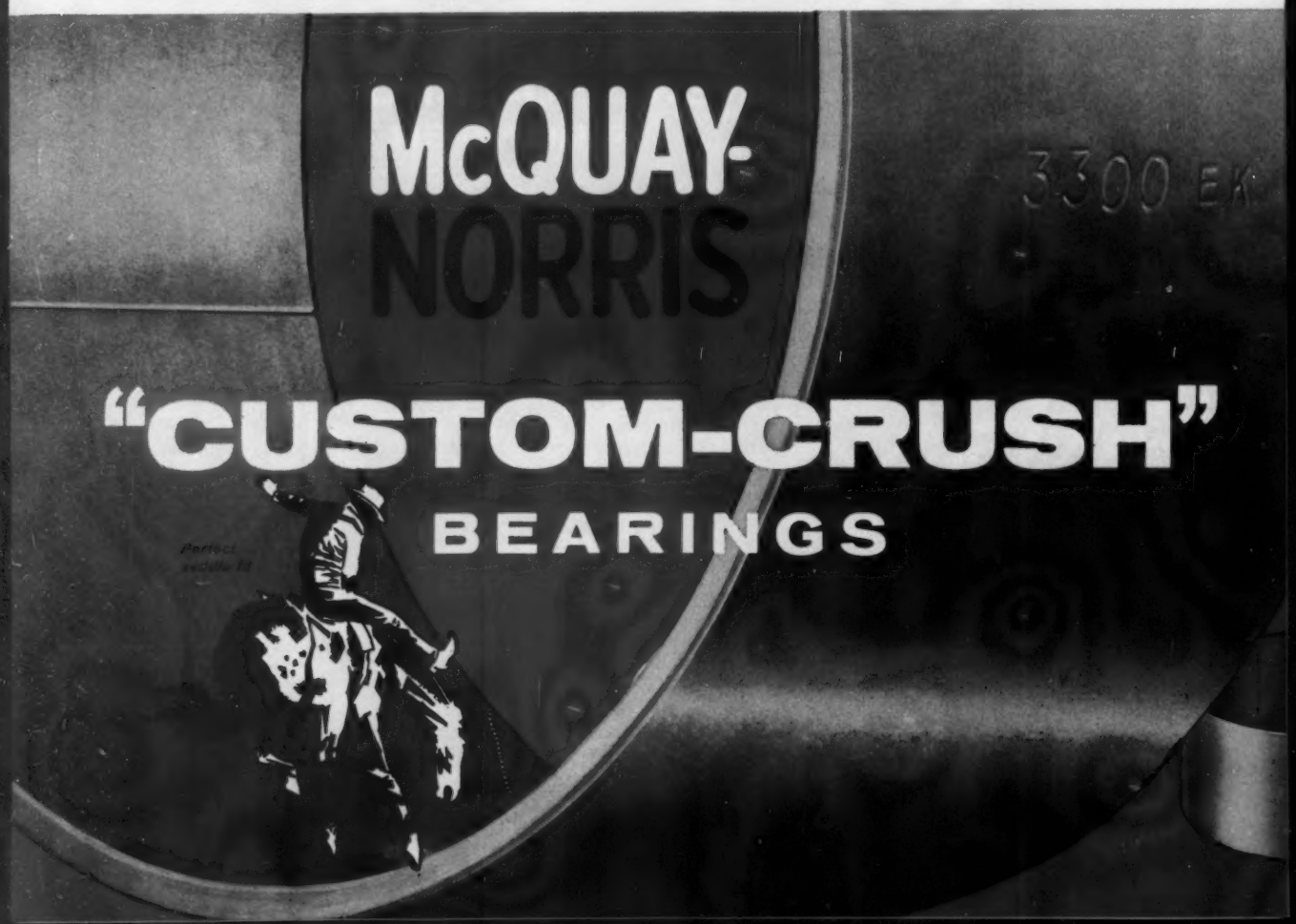
Admitting that many of these but not all of these offer muffler service, just one identifying muffler sign in even half of these independent outlets would go a long way toward making the muffler shop look sick by comparison.

You need national advertising to build prestige for the quality line of mufflers and pipes you're carrying. But even more you need local advertising to establish yourself as a qualified muffler installer.

Make sure every one of your customers and every motorist in your area is aware of the quality of the mufflers and pipes you sell and your speedy 15-minute service. To build more muffler profits invest a certain percentage of your profits in local radio and newspaper ads. All major muffler manufacturers furnish complete ad mats and radio copy free through your wholesaler.

Of the four basic ingredients that have spelled success for the muffler shop movement, free installation, speedy service, lifetime guarantees and extensive advertising, only one—consumer advertising—gives them a genuine advantage at the present time. And even now, that deficit is being wiped out. The right tools are within easy reach of any dealer who wants to cut his muffler installation time to 15 minutes.

The "lifetime guarantee" fiction has been the most successful salesgetter for the muffler shops only because you have allowed it to be so. And the "free installation" angle can be overcome merely by checking the list prices and pointing out price and quality comparisons to value-conscious customers.



**Superior Product**

Each of you sells a muffler infinitely superior to those sold in most installation shops.

How can you cash in on it? Educate your personnel to know the quality difference. Use the literature and displays your manufacturer provides to prove the difference to the motorist. And remember, people don't want price—*they want value!*

The most important thing for the independent dealer to remember at all times is that muffler jobs must be sold.

When the job is towed into a garage or driven into a service station, the normal pattern too often is to merely fix—by request—the specific damage reported by the car owner.

It is appalling to think of 300,000 dealers—business men—letting millions of dollars of muffler work roll into their shops—and roll out undone at the expense of legitimate profits and public safety.

The general repair men usually gets two or three shots at a given car during the year. Like the car dealer, the independent garage is well equipped to service his customers and is frequently loaded with business and service appointments. But the independent garageman misses, on the average, about two muffler and pipe jobs for every one he makes. In short he could easily *triple* his muffler business on the cars that come in—if only he'd look for it!

This loss of business clearly points out that the general repair shop, in most cases, does only that specific work for which the car was brought in—and then releases the vehicle still in need of profitable muffler replacement. The potential profits from this lost business last year would practically have bought a new compact car for every general repair shop owner in the country.

The service station, is in an even better position to sell a muffler and pipe job before it ever gets to a muffler shop.

First, the service stations are located wherever there is traffic and wherever people live. They are convenient. Most people regularly trade at just one or two service stations. They generally know the service station operator personally, and carry credit cards.

Second, the service station sees his prospect—the car owner—more frequently than either the car dealer or the independent garage. The average motorist stops at his service station 93 times a year. This gives the operator an opportunity to look the car over and suggest new mufflers, tail pipes, shock absorbers, etc., before a real emergency develops—And before somebody else gets the business.

No matter whether you are car dealer, service station owner, or independent garagemen, your motorist-customer can be sold. He expects and wants to be told what his car needs,—by this man he likes and trusts.

And a muffler job is the easiest of all to spot—excepting perhaps a flat tire.

A muffler job can often be literally heard as the car drives in. Worn tail pipes can often be spotted as gas is pumped. And every time the car is on a lift the exhaust system can be checked visually in 60 seconds.


NEW!

CUSTOM-CRUSH* MEANS PERFECT SADDLE FIT, TOTAL HEAT TRANSFER



CUSTOM-CRUSH is just one of the many features that make McQuay-Norris Bearings stand out. Longer engine life, less down time are assured. CUSTOM-CRUSH means perfect saddle fit, complete heat transfer.

* THE SPECIAL McQUAY-NORRIS CRUSH ALLOWANCE AT THE SPLIT LINES ASSURES PERFECT SADDLE FIT.

ORIGINAL PRODUCTION BEARINGS HAVE A UNIFORM AMOUNT OF CRUSH BECAUSE ALL PARTS ARE NEW. REPLACEMENT BEARINGS SHOULD HAVE A SPECIAL CRUSH AT THE SPLIT LINES TO COMPENSATE FOR SADDLE WEAR AND DISTORTION.

NEW! McQUAY-NORRIS "Alum-lined" engine bearings are available for late model engine applications.

MORE THAN 6400 NUMBERS of all types—a bearing for every need.

## Auto Show . . . . . *Continued from page 37*

sports cars, station wagons, luxury models, experimentals and commercial cars from the United States, Czechoslavakia, England, France, Germany, Holland, Italy, Japan, Sweden, and the Soviet Union. In addition to domestic and foreign cars, a number of motor cycles, motor scooters and motor karts were on display. Also represented at the Show were manufacturers of automobile accessories.

The compact car exhibits of the United States attracted much attention. People still eye these American compacts with amazement. They avidly examine each car's engine, interior and general appearance features. There was no doubt about the popularity of the compacts with the American public. Now, for the first time they had the chance to measure up the small American compact cars with the other small foreign imports.

Foreign car representatives, when asked how sales of imports were affected by the advent of the new compact models, stated that their sales were holding up. The opinion was that there is an active buyers market for both the foreign and domestic small cars. Everyone seemed to have an optimistic outlook for a good year in 1960. Imported car representatives felt that America is in an economy-minded mood and that small cars will answer this need for cheaper transportation. Competition between the small car manufacturers, however, is increasing. Better selling methods and improved products will be a must in order to win the American public's purchasing dollar.

What were some of the highlights of the Show? There were many new car ideas such as the Plymouth XNR. This lean roadster has streamlining that features off-center styling concentrated around the driver. A single fin, in the form of a graduated plane, runs the length of the car.

The France Jet was introduced and is expected to sell in this country for $1,495. The body of the car is made of reinforced fiberglass. Volvo also added something new to its line of cars. Volvo P 1800, the first sports coupe of this company. It includes extra features as standard equipment.

Something new and different in the world of transportation was the Amphicar. This is an amphibious vehicle which can operate on both land and in water.

The Golden Jaguar 3.8 sedan, valued at $25,000 featured genuine gold plate wherever chrome usually appears. This car, naturally, attracted quite a bit of attention. The Triumph Herald is the first British economy line with independent four-wheel suspension. The seven-section steel body is bolted to a separate chassis and each unit can be independently replaced at a fraction of the usual repair cost.

The Arabella, newest member of

*Continued on page 106*

. . . AND ALL OTHER McQUAY-NORRIS PARTS IN THE COMPLETE LINE ALSO HAVE SPECIAL FEATURES SPECIFICALLY DESIGNED FOR REPLACEMENT USE.



## Accounts Receivable . . . . . *Continued from page 57*

ranty is sent to General Motors Corporation; copies are retained by the buyer and dealer.

LETTERS TO CUSTOMERS—If a reply isn't received within 60 days, a short note such as "please reply" is written on the file copy of the letter. A copy is made and sent to the customer.

LETTERS FROM CUSTOMERS OR OTHER DEALERS—A short reply is written on the letter and a copy is made. The original is retained while the copy is sent to the letter writer.

REPAIR ORDERS ON FACTORY WARRANTY CLAIMS—The original is sent to General Motors and a copy is filed.

REPAIR ESTIMATES—Duplicates are given to customers and insurance companies.

REPAIR BILLS—The customer is given the statement and copies are made for the dealer and insurance companies.

USED CAR INVENTORY LISTS—As used cars are sold they are crossed off the inventory list. Each day copies of the revised list are distributed to salesmen.

## Calendar of Events

May 20–22—New Jersey Automotive Jobbers Assn. convention, Colony Motel, Atlantic City, N.J.

May 22–27—ASIA sales management institute, Syracuse (N.Y.) University.

June 1–4—38th annual convention of Automotive Engine Rebuilders Assn., Netherland-Hilton Hotel, Cincinnati, Ohio.

June 20–July 5—2nd annual International Auto Show to be held during 1960 Chicago Trade Fair, Navy Pier, Chicago, Ill.

June 20–22—Pennsylvania Automotive Assn., Bedford Springs Hotel, Bedford, Pa.

July 7–9—Independent Garage Owners of America 5th annual convention, Dinkler Plaza Hotel, Atlanta, Ga.

July 21–23—Automotive Trade Assn. Managers summer meeting, Grand Hotel, Mackinac Island, Mich.

Oct. 10–12—Automotive Parts Rebuilders Assn. annual convention, Conrad Hilton Hotel, Chicago.

Oct. 15–23—National Automobile Show, Cobo Hall, Detroit.

Oct. 16–21—American Trucking Assn. annual convention, Waldorf-Astoria Hotel, N.Y.C.

Oct. 23–25—New Jersey Automotive Trade Assn., Chalfonte-Haddon Hall, Atlantic City, N.J.

Oct. 28–Nov. 2—Florida Automobile Dealers Assn., Cruise to Montego Bay and Port-au-Prince.

### Raybestos Offers Trophy

W. S. Simpson, vice president of Raybestos, announced recently that his firm will award annually to the owner of the winning car in the Indianapolis "500" Mile Race a trophy emblematic of "safety in speed." The Raybestos Award is being created by sculptor Henry Kreis.


McQUAY-NORRIS

ENGINE AND CHASSIS PARTS

EXAMPLES:

- McQuay-Norris aluminum alloy pistons have heat-up inserts to stand up under modern high compression operation, and cam-ground skirts to provide constant clearance for quiet operation and oil control.
- McQuay-Norris self-aligning tie-rods and sockets are precision made, with dual bearing surfaces and self-adjusting oil tempered internal springs.

They stand OUT because they stand UP!

McQUAY-NORRIS MANUFACTURING CO.

ST. LOUIS • TORONTO

50th MILESTONE McQUAY-NORRIS 1910-1960



## Auto Show . . . . . Continued from page 104

the Borgward group made its debut at the Auto Show. It featured front wheel drive and independent four wheel suspension. The front seats have an automatic locking device which keeps them from collapsing forward during a sudden stop.

The Chevrolet Corvette incorporated the treatment of the bubble top for elimination of glare. It also featured a circulating vent system and periscope-type rear view mirror which provides an unobstructed view of the road ahead.

Two models of Renault's light truck were displayed at the Show. The Petit-Panel, and the Hi-Boy, a raised plastic roof panel truck were exhibited to the American public.

The Big-Six Borgward, a new four door saloon is fitted with a 2.3 litre six cylinder engine. Among the car's features are novel rotary door locks and a fully adjustable bench front seat or optional seats.

For people with expensive tastes there was the Daimler Majestic Major. This luxury limousine sells for approximately $8,500. It is a 4.5 litre four door sedan with a V-8 engine. It features a 220 horsepower engine and is available with automatic transmission and power-steering.


WANTED

DEALERS FOR THE NOVI DELUXE AUTOMOBILE AIR CONDITIONERS



NOVI NO. 1 QUALITY PERFORMANCE PRICE

Superior Cooling
Beautiful Design Advanced Engineering
Greatly Reduced Installation Time

Adapter kits packaged and sold separately for greater flexibility in sales. Five Novi warehouses assure fast delivery and lower inventory investment.

90 DAY WARRANTY ON PARTS

SPECIAL DEALER PRICE $182.50 Complete with clutch Federal Excise Tax included.

F.O.B. nearest Novi warehouse

NOVI SALES AND SERVICE CO., INC.

WAREHOUSES: 2501 South Grand Avenue, Los Angeles, Calif. • 2112 West 7th Street, Fort Worth, Texas • 2932 Troost Avenue, Kansas City, Missouri 20830 Coolidge Hwy, Detroit, Mich. • 190 Fourteenth St., N.W., Atlanta, Ga.

For information, write Novi Sales and Service, 20830 Coolidge Hwy, Detroit, Michigan


## Seals & Bearings . .

Continued from page 47

seals. Remember, when in doubt throw them out

Installing seals and bearings on trucks using full floating axles? First remove the attaching bolts securing the axle shaft flange to wheel hub. On some jobs two threaded holes are provided in the axle shaft flange to ease shaft removal. Installing bolts in these two holes and tightening them alternately will force the axle shaft out of the housing. Raise the lip of the special lock washer. Using a special socket wrench, remove the outer nut. Next, remove the inner nut. Having previously raised the wheel from the floor a slight amount, place a dolly under the wheel to ease its removal. Wheel, drum and hub assembly are removed as a complete unit.

Wash the bearings thoroughly in a suitable solvent. Blow air through the bearing to clean it of any grit that may remain after washing in solvent. NEVER spin a bearing by blowing air against the race cage. Severe damage to the bearing can result and possible injury to your person should the bearing fly apart. Inspect the races for cracks, chips and wear. Inspect the rollers and retainers for any damage. Lubricate the bearings with engine oil and check them for roughness.

Pack the bearings with fresh soft smooth cup grease. Assemble bearings into the hub. Place a light coating of sealer around outer rim of retainer and press into place. Install hub and drum on the housing spindle. Use wheel dolly to ease this operation and prevent damage to the spindle threads. Tighten the

Continued on page 120

*The Rochester-GM Service Line...*

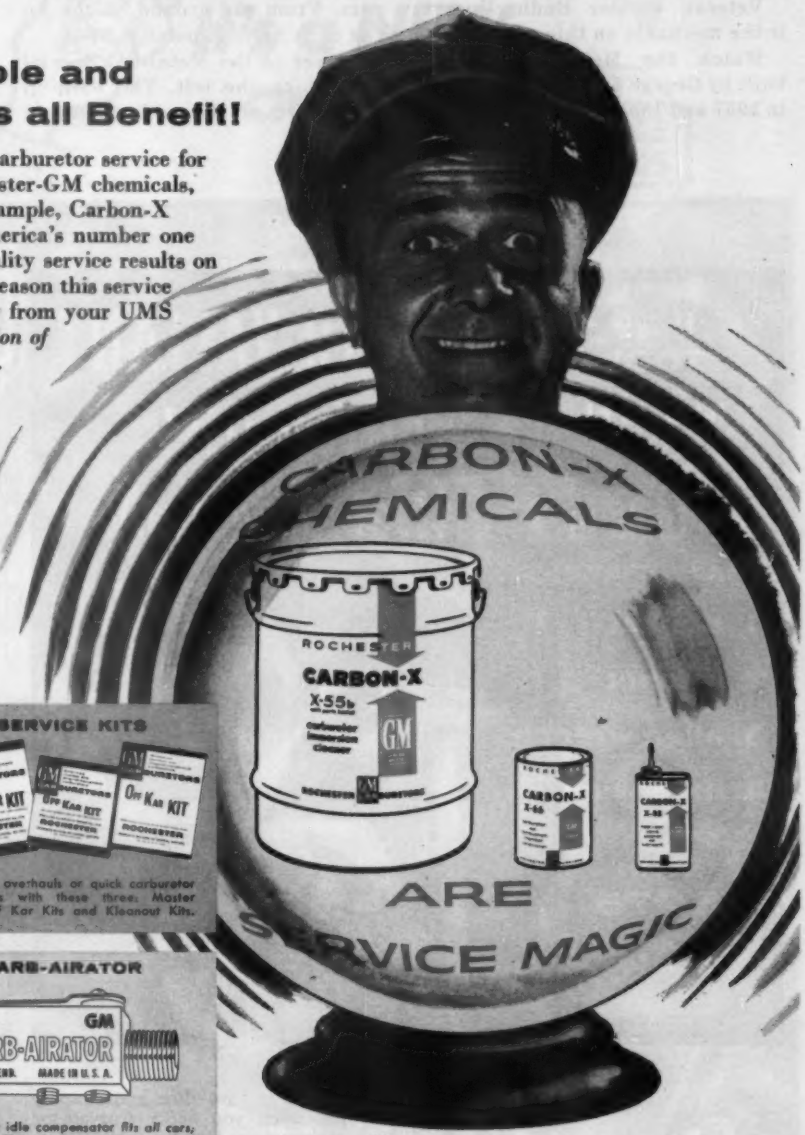
# FAST-DEPENDABLE-PROFITABLE CARBURETOR SERVICE!

## Your Service People and Service Customers all Benefit!

**You can count on fast, dependable carburetor service for every customer when you use Rochester-GM chemicals, parts and service techniques. For example, Carbon-X Chemicals are recommended by America's number one carburetor manufacturer for top-quality service results on any make car or truck. It's another reason this service line is going places fast! Order today from your UMS distributor.** ***Rochester Products Division of General Motors, Rochester, New York.***

## Free Training!

**Drop us a card and see how easy it is to have your own carburetor specialists. Every service operation should have at least one. The training is valuable—and it's free!**




**BT-3 TUNE-UP**




Balanced tune-up three ways . . . Save time with recommended procedures and materials for top-quality tune-ups.

**SERVICE KITS**




Perform overhauls or quick carburetor cleanouts with these three: Master Kits, Off Kar Kits and Kleanout Kits.

**NEW UNITS**



Up-date your customer's fuel system with original-equipment quality replacements for better performance.

**CARB-AIRATOR**




New hot idle compensator fits all cars; cures stalling due to excessive underhood heat. Quickly, easily installed.

GM CAR
GENERAL MOTORS

America's number one original equipment carburetors

**ROCHESTER CARBURETORS**

## Indianapolis . . . . . Continued from page 63

engine. What's intriguing about this one is that the car was designed specifically for this type engine. In the past, production engines were simply dropped into existing Indianapolis chassis.

Veteran builder Eddie Kuzma is the mechanic on this one.

Watch the Metal-Cal Special built by George Salih. His cars won in 1957 and 1958. And they touched off the trend to inclined engines. This year Salih is laying down his engine 15 degrees from horizontal. Before, it was 18 degrees.

Car weight is under 1600 lb. And it's 18 in. shorter than his earlier cars. From the ground at the fin the car's highest point is 37 in.

Driver of the Metal-Cal Special will sit on the left. The built-up right side of the cockpit should cut down wind buffeting during the 800 left-hand turns in the grind. This arrangement gives the driver a better view of the inside of the track.

Driver Jimmy Bryan's seat is only ¼-in. above the underpan. That's just 4½ in. above track level. How did they get him so low? One way was shifting the drive shaft to the driver's right instead of under him.

A. J. Watson, Glendale, Calif., is one of today's top designers of Indianapolis-type racers. The 35-year-old builder will come to the track with six new cars. He's itching for another win after taking the top spot in last year's race.

### Look for These Features

The six cars are almost alike. You'll spot them by these features: externally mounted oil tank; exhaust pipe shortened to a point just in front of the left rear wheel; and a high-speed fuel intake opening above the rear wrap-around bumper. For good measure, the Watson cars have an auxiliary gas intake system. The two-holed spring-loaded opening is behind the driver's head on the rear fuel tank.

Watson still rides with the conventionally-mounted engine. However, he does use off-center placement—off-center to the left.

*Continued on page 120*





Herbrand Tools

Be prepared to save time and simplify the job when you check Corvair or Valiant differentials. Use this special new Herbrand wrench, which actually replaces four tools! And simply by flipping the drive end from hex to socket, you convert from Valiant to Corvair applications. It is perfectly balanced, has a deep, full-knurl grip and will add more profit to the job every time it's used. Ask your jobber.

HERBRAND DIVISION

THE BINGHAM-HERBRAND CORPORATION • FREMONT, OHIO




This shapely young model is demonstrating the 1960 Dodge station wagon luggage rack. The rack provides more than 25 square feet of additional baggage space. The sleekly styled chrome and stainless steel rack, an optional equipment item, is capable of carrying up to 378 pounds of luggage.



It's Here!

It's a NEW addition to THE BRAKE PARTS LINE

EIS

The EIS-O-VAC Tester for POWER BRAKE CYLINDERS

Get set for high-volume-profits with EIS-O-VAC... the lowest priced tester in the field! The EIS-O-VAC is versatile . . . it does everything you would expect from the most expensive unit, it tests all vacuum cylinders* — all years — including high-pressure (1800 PSI) Hydrovacs!

**FEATURES**

- Easy and quick method of setting up cylinders!
- All fittings and adapters furnished.
- Built-in drip pan!
- High-pressure fittings need no big wrenches for tightening — O-Rings eliminate continuous gasket replacement!
- Instruction manual and Test-Pressure Specification Guide supplied!

NO. T-1701
VACUUM PUMP AND MOTOR—
Available as optional equipment.

Write for descriptive literature

*BENDIX Treadle-Vacs, Hydrovacs, Master-Vacs, Power-Vacs . . . All KELSEY-HAYES Bellows Units . . . All MORAINE units and all MIDLAND Hy-Power Units.




NO. T-1700




POWER BRAKE PARTS AND KITS
for Car and Truck applications



THE BRAKE PARTS LINE

BRAKE HOSES
BRAKE TOOLS
BRAKE EQUIPMENT
BRAKE CABLES
POWER BRAKE PARTS AND KITS
SUPER SAE BRAKE FLUIDS
HYDRAULIC BRAKE PARTS AND REPAIR KITS
MASTER AND WHEEL CYLINDERS

EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.

Ask your EIS Distributor or write for Catalogs!

# NOW- A SPECIAL PUROLATOR




This $17.50 Schick Ladies Crown Jewel costs you nothing when you buy the new Purolator air filter Bonanza. *The shaver comes packed right in the Bonanza carton.*

# AIR FILTER BONANZA

## This time—a wonderful gift from you to the ladies—the beautiful new, $17.50
## Schick Ladies Crown Jewel Shaver!

HERE's the air filter Bonanza you asked for! An exciting offer that will undoubtedly match the success of Purolator's year-opening oil filter Bonanza in which the nation's dealers received thousands of Schick 3-speed Shavers. This time the offer is the beautiful, practical Schick Ladies Crown Jewel Shaver—a gift that's sure to get a big welcome at home.

**Here's all you do to get this $17.50 Schick Shaver at no extra cost!**

- Buy the $41.14 Purolator Air Filter Bonanza refill assortment of 15 fast-moving air filters
- Included right in the same package is the Schick Ladies Shaver

**How to sell more Purolator air filters this summer!**

Just remind your customers how a clean air filter increases gasoline mileage . . . gives a car more pep and power. That's what we'll be doing 13 times every weekend on NBC's MONITOR RADIO from July 2 through the Fall to a total audience of 17 millions every weekend.

***Order now from your Purolator supplier . . . supply is limited!***

"Purolator" Reg. U. S. Pat. Off.,




**The Standard Equipment Line**

# PUROLATOR

**OIL, AIR & FUEL FILTERS**

**PUROLATOR PRODUCTS INC., Rahway, N. J.; Toronto, Ontario, Canada**

# NEW LITERATURE DESCRIPTIONS

### Color Directory

*Has colors for every car cataloged*

**Martin Senour Company: An all-in-one car color manual that simplifies color selection was announced. This automotive color directory, containing more than 1,200 color samples, has colors for every car catalogued by most manufacturers. The refinisher can find the color he needs for touch-ups and re-dos. Colors for every car from 1954 through 1959 are listed as well as Chevrolet, Ford and Plymouth colors from 1952 to the current year. It offers selection of the right color with a full view of the color range available for each individual car make.** *Write: Martin Senour Co., 2500 S. Senour Ave., Chicago, Ill.*






### Soft Face Hammers

*Catalog on industrial hammers*

**Metrocraft Alloy & Plastic Co.: Just published is a new catalog describing company's line of soft-face hammers for industrial use. This catalog, in color, illustrates and describes a full range of plastic hammers, with or without replaceable screw-on plastic tips. Also described is a new "no bounce" hammer, babbitt hammers and tamper drifts.** *Write: Metrocraft Alloy & Plastic Co., 1039 Memorial Ave., West Springfield, Mass.*

### Service Stations

*Illustrates latest in service station equipment*

**Branick Mfg. Co.: A new 12-page Service Station Catalog, illustrating the latest in air-operated service station equipment is announced. It includes jacks, tire spreaders and miscellaneous products.** *Write: Branick Mfg. Co., Fargo, North Dakota.*

### Safety Manual

*Contains data on every aspect of industrial safety*

**National Safety Council: Publication of the fourth edition of "Accident Prevention Manual for Industrial Operations" is announced. The revised volume is a complete and informative safety reference manual. The manual was compiled, edited and reviewed by safety specialists. It draws on the knowledge of safety men from nearly 7,000 firms spanning every U.S. industry. The publication contains more than 500 illustrations and 1,542 pages of up-to-the-minute data on every aspect of industrial safety.** *Write: National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.*

*Continued on page 116*







## It's easy to service Delco Moraine POWER BRAKES

Kits, parts and complete assemblies are readily available through car dealers and U.M.S. outlets. Proper diagnosis will determine which is the best way to restore dependable performance.

Ask your dealer for copies of the Delco Moraine power brake service manuals. They will help you perform all repairs surely and efficiently, as recommended by the original manufacturer.

DELCO MORAINE

DEPENDABLY MADE

Division of General Motors, Dayton, Ohio

*Dow announces a new concept in customer service*

# NEW PRODUCT PROTECTS COOLING SYSTEM ONE FULL YEAR

# DOWGARD*




**1** One full fill of this new scientific formulation gives year 'round protection from rust, corrosion, freezing and overheating. Installed now, it gives your customers good, dependable cooling system performance this summer and next winter.

**2** Sales limited to service dealers! Only you have the facilities and know-how to install this product properly. DOWGARD cooling system fluid cannot be sold in cash-and-carry outlets. And, DOWGARD can be installed now while you have time to do the job right.

*Trademark

As you know, the problem of rust and corrosion in cooling systems had never been completely solved by adding a single product. *Until* DOWGARD.

You see—

All other cooling system products have the same common weakness—they must be added to local water which varies in chemical make-up from community to community. And, because they must be *average* enough to work with *any* water, the protection delivered is uncertain!

But DOWGARD does not have this weakness. It contains its own de-ionized water, its own unique inhibitor system. You completely fill the cooling system with it to completely counteract rust-forming elements in the water. Result: One full fill with DOWGARD stops rust and corrosion damage for one full year.

You can perform a genuine service for your customers by recommending an immediate fill with DOWGARD.

Summer heat can cause rust to form much faster than in winter. This can result in less heat transfer efficiency which leads to pings, knocks, lower gas mileage—even more serious troubles—if left unchecked.

By installing DOWGARD now, you assure proper cooling system protection through the hot weather ahead. And this protection continues through next winter. DOWGARD protects from 240°F. to —40°F.

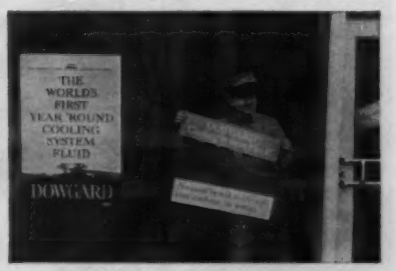
*Don't miss this opportunity* for greater customer service. For information as to how you can be a charter dealer for DOWGARD cooling system fluid, contact your jobber, or write: National Brand Sales, The Dow Chemical Company, Midland, Michigan.



**You are the man.** To install DOWGARD, first completely drain the radiator, block (both sides on V-8's) and heater. Service and clean if necessary, then completely fill with DOWGARD. You have the facilities and know-how to do this important job right. That's why DOWGARD is being sold only through service dealers. *Dow is putting cooling system service . . . and profit . . . back where it belongs!*




**Multi-million-dollar advertising campaign.** Dow ads running in April, May, June and July will tell motorists about the need for DOWGARD now. A new, hour-long TV mystery show, colorful ads in *Life*, *Look*, *The Saturday Evening Post* and *Reader's Digest*, plus nation-wide newspaper advertising will stimulate customer interest




**Identify yourself** as a service outlet for DOWGARD cooling system fluid with these hard-hitting point-of-sale materials. Window banners, streamers, stack barkers, customer certificates and other promotion materials are yours free from your jobber. Be sure that you and your attendants use them fully for the maximum effectiveness.

This attractive blue-and-white radiator cap is provided to you to place on cars after DOWGARD has been installed. It is a badge of prestige for the motorist and a reminder of the date for reservicing.




DOW THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

*See "The Dow Hour of Great Mysteries" on NBC-TV*

## New Literature . . . . . Continued from page 112

### How-to-do-it Catalog

*Covers automotive repair and service problems*

**Houser Engineering & Mfg., Inc.:** A 32-page catalog containing helpful information on many automotive repair and service problems has been issued. The various parts, and the troubles they help overcome, are presented in "problem and solution" form. It is illustrated with cross-section and dimensional drawings. *Write: Houser Engineering & Mfg., Inc., Bluffton, Ind.*

### Radiator Servicing

*Describes the radiator servicing business*

**Inland Mfg. Co.: A free 32-page** booklet which describes how to go into the radiator servicing business is available. Entitled "New Blueprint for Profits," it covers the procedure for setting up a radiator service department. It shows the latest compact shops, testing, cleaning and repairing units, individually and in combination. There is a price list and specification chart. In addition, various methods for arranging the equipment necessary are charted. *Write: Inland Mfg. Co., Dept. B-87, 1108 Jackson St., Omaha 2, Neb.*


CLEAN UP 2 WAYS WITH DUAL-ACTION LEE FILTERS




1 LEE FILTER DUAL-ACTION GIVES YOUR CUSTOMERS AN EXTRA SAFETY MARGIN

Lee *Resinweld* Oil Filters, with their unique Feridium® Anode, remove all sludge *and* acids, assuring greater engine performance, greater customer satisfaction. Lee Gas Filters remove both sludge and water. Lee flame-proof Air Filters prevent underhood fires caused by carburetor backfire. All combine to boost your sales.

2 LEE FILTER DUAL SALES-ACTION GIVES YOU AN EXTRA MARGIN OF PROFIT

First, Lee offers you *extra* profits on a unique line of filters for every make and model car. Then Lee doubles up by advertising nationally to 14,000,000 consumers in major markets—including yours! Call or write now for all the profit-making details.

LEE FILTER CORPORATION, EDISON, NEW JERSEY
LEE FILTER DIVISION, 267 NIAGARA ST., TORONTO, ONTARIO, CANADA


### Lift Manual

*Shows how to lift 1960 model cars*

**Globe Hoist Co.: Just announced** is the publication of the company's 1960 Data File covering "Lift Proving Tests" made on all new model automobiles. This 32-page illustrated manual shows how to lift all late model cars on every type of hydraulic or electric powered hoist, including the frame-engaging models as well as 2-post types, single post free wheel and drive on Hoists and 4-post electric Lifts. Quick-reference charts in the front section of the book point to the recommended pick-up points on the various types of chassis frames. *Write: Globe Hoist Co., East Mermaid Lane at Queen St., Philadelphia 18, Penna.*

### Wiring Wall Chart

*Determines wire gauge for any automotive wiring job*

**Standard Motor Products, Inc.:** A guide for determining the correct wire gauge for any automotive wiring job is featured in a new wall chart. To use the guide, the mechanic need only determine the amperage or candle power of the circuit. He then can find the proper gauge listed in the column corresponding to the length of wire to be installed. *Write: Standard Motor Products, Inc. 37-18 Northern Blvd., L.I.C. 1, N.Y., or phone EXeter 2-2000.*




A casual examination of the old tire valve at the right might miss the serious damage at the seating surface. This snap-in valve was carefully removed after successfully performing throughout the life of one tire. Only a comparison with the new, fresh valve shows why it is not good business to leave the old valve in the rim when mounting new tires you sell.

Schrader Tire Valves are the finest in the world, and they are engineered to outlast the finest tire. BUT rubber ages, loses elasticity upon which the ideal seal depends. It's far better business to *be sure a valve is as new as the tire it serves.*

*Remember: Always install a new valve with every new tubeless tire you mount.*

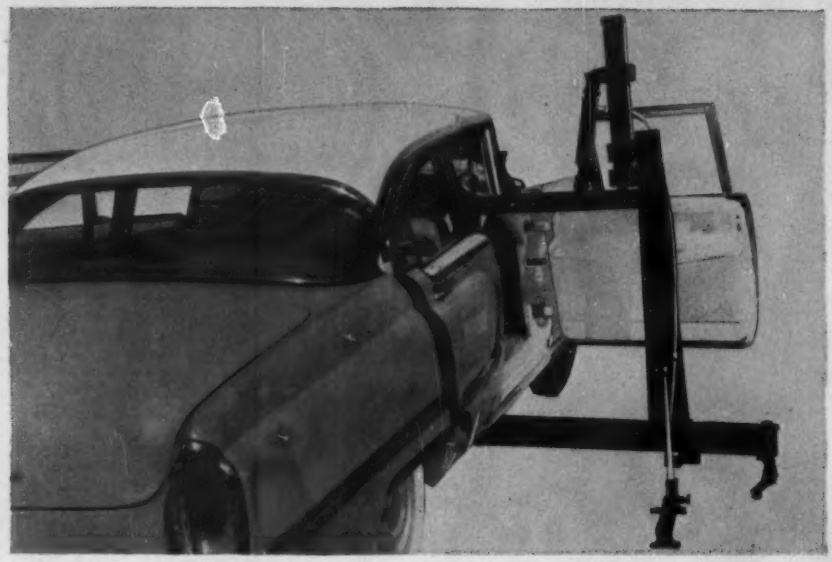
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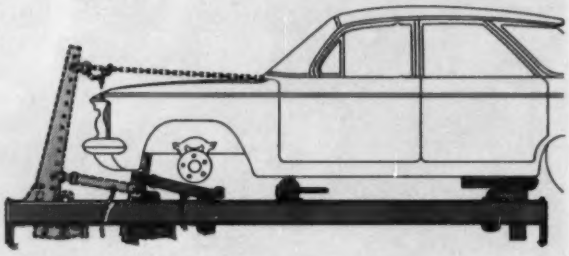


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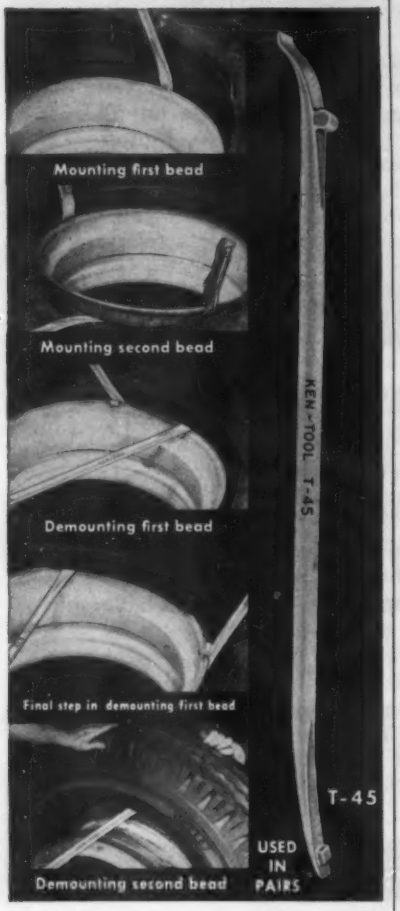
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AKRON 5, OHIO

## Body Shop . . . . . .

*Continued from page 53*

Finished appearance is improved because the rivets are concealed when the chrome strip is snapped back into place over the molding. Similarly, when joining a rear quarter panel and a rear quarter panel extension, the use of rivets instead of welding eliminates the need for the removal of glass and minimizes possible paint damage.

The installation of a rear body panel can now be done with rivets at a time saving of about 30 minutes, they claim. The operations are the same as those for installing rear quarter panels, except that in most cases, clamps are not necessary to hold the work for drilling and riveting operations.

Another application developed by Mr. Long is the repair of hood brackets. Spot welds made in the manufacturer's plant frequently break loose when the car is involved in a collision. Welding formerly used to effect such repairs often resulted in the blistering of paint. This has been eliminated by using the rivets. They say that considerable time is saved by this method.

## Seals & Bearings . .

*Continued from page 106*

adjusting nut while turning the hub to make sure all bearings are seated in full contact with their races. Tighten the nut to 50-60 foot pounds torque. Back off the adjusting nut $\frac{1}{8}$ turn. Make sure wheel turns freely. Secure lock nut by bending the locking tab on the special lock washer. Reinstall the axle shaft and secure the flange with lock washers and nuts.

## Indianapolis . . . . . .

*Continued from page 108*

Big feature in all Watson cars: three built-in air jacks. They're for high-speed tire changing during pit stops. And in recent years that's where many a race has been won or lost.

How do the jacks work? When the car pulls into the pit, a crewman plugs an air hose into the side of the car. This works the jacks. And the car's off the ground in 0.3 sec. Release the air, and the car's down in 0.7 sec. This might well cut a big 10 to 15 sec. off a pit stop.

Other cars in the Watson 1960 series will feature contour-fitted driver seats and a hand-operated weight shifting device.



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This man may be saving a motorist's life, states the National Wheel & Rim Association, St. Louis. He's using the new "Drum Wear Safety Gauge" which shows in second whether a drum is safe for further machining.

Calibration marks for drum diameters of 9", 10", 11", 12", 13" and 14" are actually .060" ($^1/_{16}$") more than the original outside diameter marked. Thus, the maximum safe measurement of the drum is shown at a glance. The .060" maximum is recommended by automotive associations, service manager groups, brake drum and lining manufacturers, safety organizations and parts associations.

The gauge, priced nominally, is available from warehouse-distributor members of the National Wheel & Rim Association.

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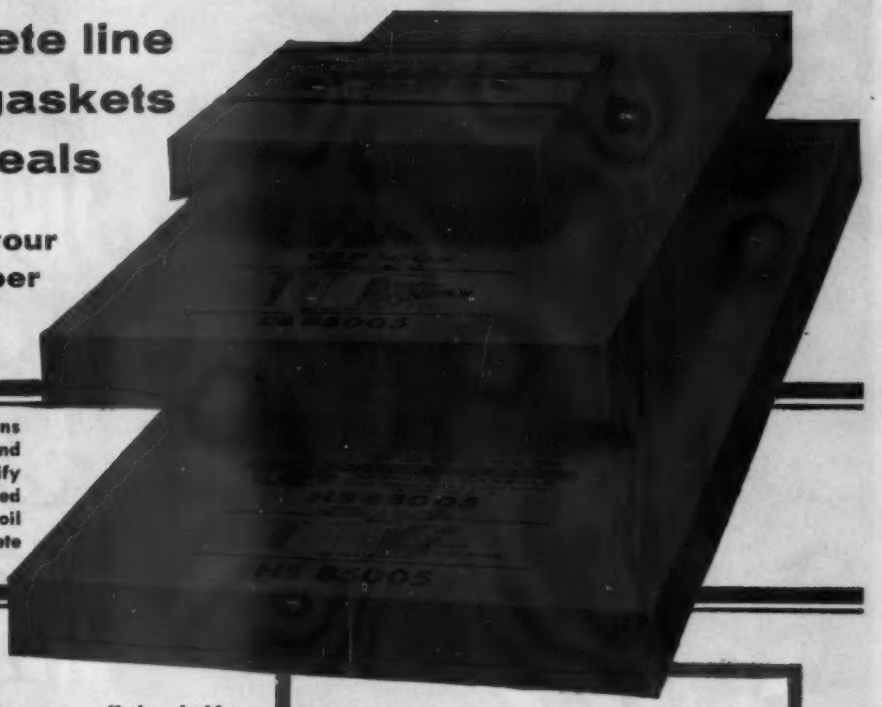
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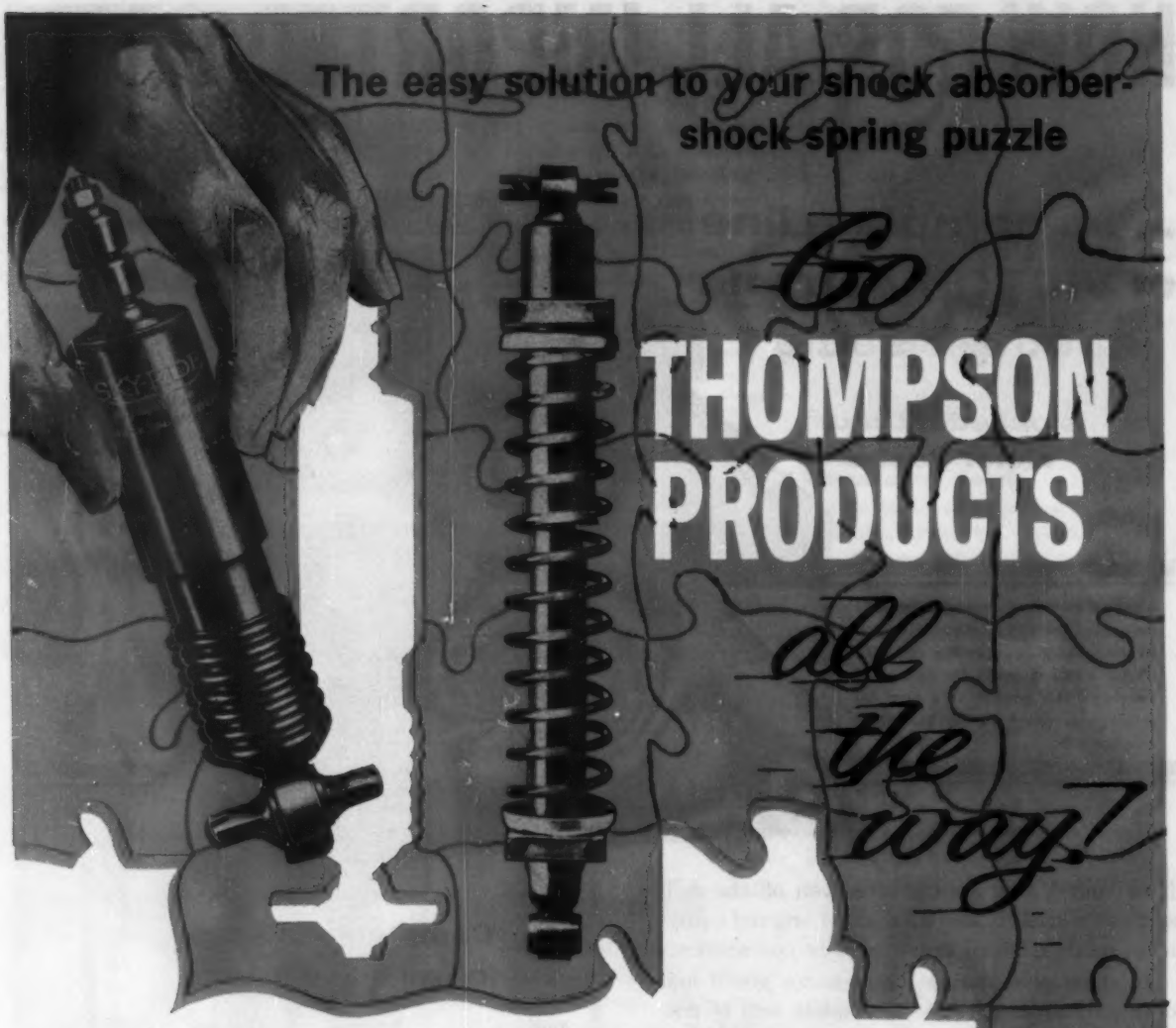
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## Safety-Check Representatives Named to Help Program

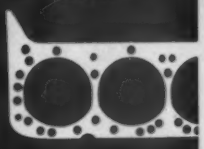
Twenty-one men have been assigned to the Auto Industries Highway Safety Committee by automobile and tire companies; they are serving to May 15th to help State Program Directors and local committees organize Vehicle Safety-Check programs.

Pictured from left to right in photo above at a recent Washington, D.C., briefing session are: (standing) Terence Fitzgerald, Cadillac Motor Car Division; Howie Schertzinger, Goodyear Tire & Rubber Company; James Biggs, Goodyear; William Herrington, Buick Motor Division; Jack Goggin, GMC Truck and Coach Division; Paul Barnard, B. F. Goodrich Company; Lynn Jones, Chrysler Division; Julius Anderson, General Tire & Rubber Company; Rudolph Ruyl, U.S. Rubber Company; W. F. Hoffman, Oldsmobile Division; Vernon Langille, Firestone Tire & Rubber Company; Ken Porter, Plymouth-DeSoto-Valiant Division.

(Seated) Cort Edmonston, Pontiac Motor Division; Joseph Conway, U.S. Rubber; Peter De Paolo, Firestone; Frank Lowrey, Asst. Mng. Dir., Auto Industries Highway Safety Committee; James Rutherford, B. F. Goodrich; M. R. "Bud" Darlington, Mng. Dir., Auto Industries Committee; Louis Taylor, Chevrolet Division; Larry Nagler, American Motors; Joseph Fassel, Studebaker-Packard; D. A. Geil, Dodge Division; James Russell, Dodge Division.

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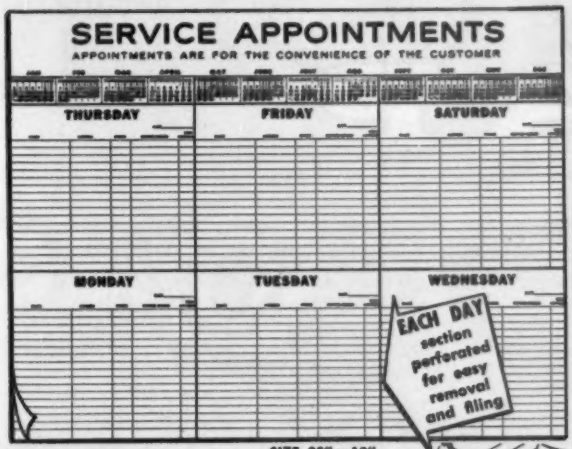

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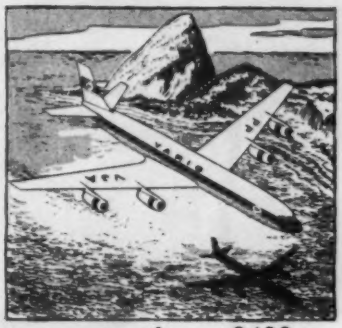
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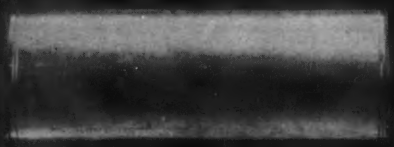
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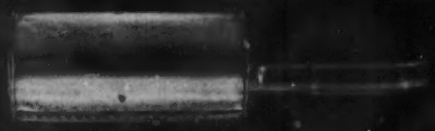
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BUICK exhaust and tail pipes are formed to fit without bending or adapting . . . reduces installation time

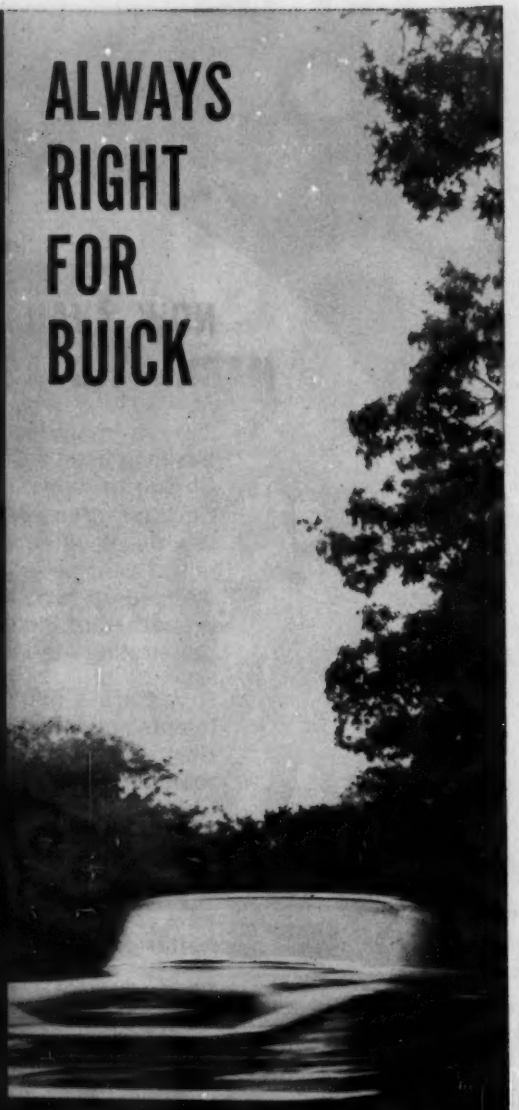


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# THE LAST LAFF





"-and last week it was just your steering assembly that needed fixing, eh, Mr. Jones?"

A reckless driver is a fellow who passes you on the highway in spite of all you can do.



"What'd I tell ya—see—there's a crying need for this product—"

"Integrity and wisdom are essential to success in every business," said boss to new employee. "By integrity, I mean that when you promise a customer something, you must keep that promise, even if we lose money."

"And what is wisdom?" asked the new man.

"Don't make such damn fool promises!"

Boss: "Get my broker, Miss Jones."

New Steno: "Yes sir, stock or pawn?"

Money doesn't always bring happiness. A man with ten million dollars is no happier than a man with nine million dollars.

"I ache all over," a man complained.

"What's the trouble?" his friend asked. "A couple of weeks ago we bought a lot of ultra modern furniture," he explained, "and I've just found out that all this time I've been sleeping in the bookcase."

Husband, pointing out motioning traffic cop, to off-in-the-clouds wife at steering wheel: "You can go now, or are you waiting for him to turn green too?"

A lawyer sent an overdue bill to a client, attaching a note which said, "This bill is one year old."

By return mail the lawyer had his bill back, To it was attached another note: "Happy Birthday."

There's one thing that will give you more for your money than it would ten years ago—the penny scale at the corner drug store.




"Business has been so punk lately I made it over into a pencil sharpener."

Don't always give your wife credit; she appreciates a little cash, too.



"Well, it's our policy to 'pay now, go later'!"

# "We turn minutes into dollars by checking every belt!"



says Leon Igel, Owner, Stratford Garage, Inc.
323 West 96th Street, New York, N. Y.

"We operate a busy uptown garage, and we've learned through the years to make every motion count in order to serve our customers better. The minute or so it takes to check a customer's belt is time well spent. If he needs one, we quickly install a Gates V-Belt in a matter of minutes. If he doesn't need one, he still appreciates our thoroughness.

"Finding and installing the right belt is easy — even for our newest employee — because the Gates Dial-Finder and the Display Rack make it almost impossible to get the wrong belt! All of our boys keep an eye out for the Gates Mystery Car — and that sure results in every belt being checked on every car, every day!"

TPA 489

Phone today for YOUR Gates V-Belt Display Rack. Supplied by your Gates Jobber, this attractive fixture puts the right belt for any car at your fingertips. Gates V-Belts enable you to offer the most complete coverage of cars available—including new "compacts" and foreign cars.

Gates

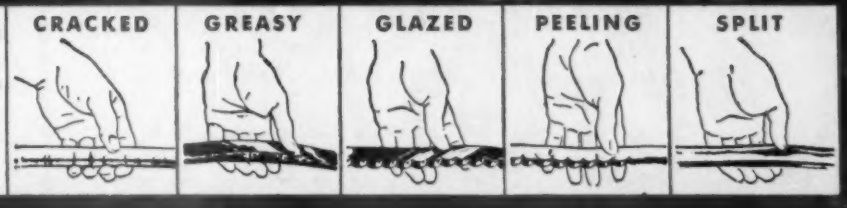
The Gates Rubber Company, Denver, Colorado

World's Largest Maker of V-Belts




**To find belt wear always turn belt over** — The underside of the belt... not the top... tells the true condition of the belt.

**REPLACE BELTS LIKE THESE:**




# Gates Vulco V-Belts

IT'S HERE! THE BIG BOOST!

# LOOK MAGAZINE · MAY 10th

Get your
FLASHING
SAFETY LIGHT
FREE! with
each of these three

Thermoid



COMPLETE WITH BATTERY,
$6.14 VALUE!
KEEP IT OR RETAIL IT FOR
$4.19

# BIG BOOST DEALS

Get set for the BIG BOOST in Look Magazine... on the stands May 10

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FREE SAFETY LIGHT
(WITH BATTERY)
WITH ANY 12 AXLE SETS OF
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THERMOBOND
BONDED
BRAKE SHOES

**Thermoid Deal No. 2**
FREE SAFETY LIGHT
(WITH BATTERY)
WITH ANY 18 AXLE SETS OF
THERMOID
PORTOBOND
BONDED
BRAKE SHOES

**Thermoid Deal No. 3**
FREE SAFETY LIGHT
(WITH BATTERY)
WITH ANY 50 PIECE SELECTION OF
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FAN BELTS
AND/OR
"REDI-CURV" HOSE

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